CHAPTER – 1
INTRODUCTION

Education is the key to social and economic development of a society. It encompasses every sphere of human life. Level of literacy has a profound bearing on the level of human development. In India, the British Government through trial and error worked out a system of education which was broadly divided into three major stages viz., Primary, Secondary and Higher Education. This pattern continued to be the framework of education system even after independence, and is still continuing today.

During the post-independence era, India adopted a National Policy for children in 1974, declaring children to be the nation’s most precious asset. Several subsequent steps were taken to strengthen education system in the country in terms of achieving the goal of providing education to all through universal enrolment, and ensuring literacy for all children of school going age either through formal or non formal system of education. However, the quality aspect of education remained by and large a neglected area till today. India with a great human resource has the potential to be a leading knowledge power in the world if the education system from the very beginning is designed to ensure quality output.

Because of poor economic condition of a large section of the population in rural India, even today most parents cannot afford to send their children to early schooling. For a number of first generation learners who do not get any support from their parents at home, the role of teachers in imparting education is extremely important. Endeavour has been made by successive governments to ensure that every single child in India has access to great teachers, thereby democratising the quality education for all children across the country.

The census of India (2011) presented a gloomy picture on the literacy position of the country. Even after 65 years of independence, only 74% of the country’s total population of 1,210,193,422 is literate. The male literacy rate was 82.1% and that for female it was only
65.5%. Among the states, Kerala has been the most literate state in the country with about 94% literacy rate (Table 1.1).

Table 1.1: State-wise literacy rate during 2001 and 2011 census years in India.

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>Literacy Rate (%)</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kerala</td>
<td>90.86</td>
<td>93.90</td>
</tr>
<tr>
<td>2</td>
<td>Mizoram</td>
<td>88.80</td>
<td>91.60</td>
</tr>
<tr>
<td>3</td>
<td>Tripura</td>
<td>73.19</td>
<td>87.80</td>
</tr>
<tr>
<td>4</td>
<td>Goa</td>
<td>87.40</td>
<td>87.40</td>
</tr>
<tr>
<td>5</td>
<td>Himachal Pradesh</td>
<td>76.48</td>
<td>83.80</td>
</tr>
<tr>
<td>6</td>
<td>Maharashtra</td>
<td>76.88</td>
<td>82.90</td>
</tr>
<tr>
<td>7</td>
<td>Sikkim</td>
<td>68.81</td>
<td>82.20</td>
</tr>
<tr>
<td>8</td>
<td>Tamilnadu</td>
<td>73.45</td>
<td>80.30</td>
</tr>
<tr>
<td>9</td>
<td>Nagaland</td>
<td>60.47</td>
<td>80.10</td>
</tr>
<tr>
<td>10</td>
<td>Manipur</td>
<td>63.74</td>
<td>79.80</td>
</tr>
<tr>
<td>11</td>
<td>Uttarakhand</td>
<td>71.62</td>
<td>79.60</td>
</tr>
<tr>
<td>12</td>
<td>Gujarat</td>
<td>69.14</td>
<td>79.30</td>
</tr>
<tr>
<td>13</td>
<td>West Bengal</td>
<td>68.64</td>
<td>77.10</td>
</tr>
<tr>
<td>14</td>
<td>Punjab</td>
<td>69.65</td>
<td>76.70</td>
</tr>
<tr>
<td>15</td>
<td>Haryana</td>
<td>67.91</td>
<td>76.60</td>
</tr>
<tr>
<td>16</td>
<td>Karnataka</td>
<td>66.64</td>
<td>75.60</td>
</tr>
<tr>
<td>17</td>
<td>Meghalaya</td>
<td>62.56</td>
<td>75.50</td>
</tr>
<tr>
<td>18</td>
<td>India</td>
<td>64.84</td>
<td>74.04</td>
</tr>
<tr>
<td>19</td>
<td>Orissa</td>
<td>63.08</td>
<td>73.50</td>
</tr>
<tr>
<td>20</td>
<td>Assam</td>
<td>63.25</td>
<td>73.20</td>
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<tr>
<td>21</td>
<td>Chhattisgarh</td>
<td>64.66</td>
<td>71.00</td>
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<tr>
<td>22</td>
<td>Madhya Pradesh</td>
<td>60.53</td>
<td>70.60</td>
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<tr>
<td>23</td>
<td>Uttar Pradesh</td>
<td>56.27</td>
<td>69.70</td>
</tr>
<tr>
<td>24</td>
<td>Jammu and Kashmir</td>
<td>55.52</td>
<td>68.70</td>
</tr>
<tr>
<td>25</td>
<td>Andhra Pradesh</td>
<td>60.47</td>
<td>67.70</td>
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<tr>
<td>26</td>
<td>Jharkhand</td>
<td>53.56</td>
<td>67.60</td>
</tr>
<tr>
<td>24</td>
<td>Rajasthan</td>
<td>60.41</td>
<td>67.10</td>
</tr>
<tr>
<td>28</td>
<td>Arunachal Pradesh</td>
<td>54.34</td>
<td>67.00</td>
</tr>
<tr>
<td>29</td>
<td>Bihar</td>
<td>47.00</td>
<td>63.80</td>
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The high dropout rate from educational institutions is another area of concern. For example, only 7% of the population that goes to school manages to graduate. Only 15% of those who enrol in a Primary School manage to make it to High School and achieve a place in the higher education system. The following are some of the factors, which may be attributed to India’s poor performance in education:

1. About 80% of schools are managed by the government.
2. Private schools are expensive and out of reach of the poor.
3. ‘More hands to earn’ remains the mentality amongst many families and therefore little kids are sent to work rather than school.

4. Infrastructure facilities at schools across rural areas and in slums continue to be inadequate and dispense very poor quality of education.

5. The teachers are not well-qualified. In most cases they are not well-paid. The low pay does not encourage them to put hard work.

These are some of the chronic problems in education sector of India that the government has been trying hard to fight against. In the formal system of education, the main categories of schools are:

1. **Pre-Primary School:** Pre-Primary School education is divided into two levels viz., Lower KG (for children between 3–4 years) and Upper KG (for children between 4–5 years).

2. **Lower Primary School:** This serves as the link between Pre-Primary School and Primary education. However, not much emphasis is laid on this level by the prevailing education system.

3. **Primary School:** The Government has made primary education compulsory for children between the age group of 6 to 14 years vide Right to Education Act, 2010.

4. **Secondary School:** This level serves as a link between elementary and higher education.

5. **Senior Secondary School:** After class ten, a student is admitted to Senior Secondary School which has three streams, viz., Arts, Science and Commerce. This is the last stage of school education with classes XIs and XII.

**Higher Education:** This level includes graduate and post graduate classes of education. After completion of senior secondary education, students can choose fields of their interest and pursue graduate and then post graduate courses.
There are 35 education boards across the country. While most of these are regional i.e. state-specific, Central Board of Secondary Education (CBSE), Council for the Indian School Certificate Examinations (CISCE) and National Institute of Open Schooling (NIOS) are national in character. The National Council of Education Research and Training (NCERT) is apex body for curriculum development. Most schools in the country seek technical assistance from this body on the matter relating to course curricula.

**State Boards:** Since 80% of the schools in India are managed by the state governments, most children in India get enrolled under the state boards. The Boards of Secondary Education across major states have been established to streamline the secondary education in the respective states.

**CBSE (Central Board of Secondary Education):** The Central Board of Secondary Education which falls under the purview of the Central Government is a board of education for both public and private schools in India. The board originally established in 1929, was reconstituted with all-India jurisdiction in 1962.

**CISCE (Council for the Indian School Certificate Examinations):** The popular ICSE (Indian Certificate of Secondary Education) examination for Class X/Grade X, and the Indian School Certificate (ISC) examination for class XII/Grade XII are conducted by the Council for the Indian School Certificate Examinations, an all-India, but private and non-governmental board of school education in India.

**NIOS (National Institute of Open Schooling):** The National Institute of Open Schooling (NIOS), formerly known as National Open School (NOS) was established by the Ministry for Human Resource Development, Government of India in November, 1989 in pursuance of National Policy on Education, 1986. This board aims at providing quality education in rural areas in an inexpensive manner. NIOS is providing a number of vocational, life enrichment, and community oriented courses besides general and academic courses at secondary and senior secondary levels.
Cambridge International Exams and International Baccalaureate (IB): International Baccalaureate and Cambridge International Examinations offer international qualifications to students. This is a recent phenomenon in various parts of the country and is mostly offered by up market schools.

Islamic Madrasah Schools: These schools may be either controlled by the state government or run autonomously or may be affiliated to the Darul Uloom Deoband, with its headquarters in the Saharanpur District of Uttar Pradesh.

Recent initiatives by Government of India in education sector are praise-worthy. The Right to Education Act, 2010 and implementation of Central Sector Scheme such as Sarva Siksha Abhiyan (SSA) are important mile stones in the development of education sector in the country. Both these initiatives aim at making education universal and improving the quality of education.

The Right of Children to free and compulsory education vide Right to Education Act (RTE) is indeed a laudable step. It was passed by the Indian parliament on 4th August, 2009. The Act and the Rules framed under the Act describe the modalities of the provision of free and compulsory education for the children between 6 and 14 in India (www.wikipedia.org). The right to free and compulsory education for every child is guaranteed under the article 21 A of the Indian constitution. India became one of the 135 countries of the world to make education as one of the fundamental rights of the children. Every child will get 8 years of elementary education in vicinity of his/her neighbourhood. Under this Act, 25% of the enrolment in all private schools shall constitute the children of weaker section and disadvantage communities. In addition, all the schools will have to follow the norms and standard laid down in the act, and no school that does not fulfil the standard within three years will be allowed to function.

Today, the increasing flow of investment from private sector to the education system in the country is not only augmenting the government’s efforts to provide quality education in the
country, but also is making us believe that the children of India will get off the streets and start making education their mainstay for a successful life in near future. The quality of education or learning is linked to the quality of teachers (Burchfield 1991; Lockheed and Hannushek 1988). A good teacher can make every subject interesting and fascinating. The enrolment and continuity of students in the school often depend on the quality of education imparted in the school. The students do expect quality standard of teaching from their own teachers in their schools. Teachers from all across the country can play a huge role in making teaching an attractive and fulfilling profession by ensuring good quality of education in their respective schools. Therefore, the role of the teachers is very crucial in giving foundation to the quality of education in the country, which in turn can contribute to the economic development.

As per the declaration of United Nations Conference in 1990 (UNESCO 1990), all the nations must strive to attain the goal of achieving universal free and compulsory education. Most of the countries are committed to impart education to their whole population, but remain silent about the quality of education.

The development of India during the last decade is reflected in rising productivity in all sectors. The role of education either directly or indirectly in improving the productivity cannot be undermined. The vital role of education in achieving the economic prosperity of the nation has been emphasized by several workers (Dutta 2006, Tilak 2002, Chatterji 2008). India with its abundant natural resources including human resources needs a sound educational system that would ensure optimum utilization of these resources to keep the nation on a growth track in a sustainable manner.

Education is the basis for economic growth as well as social transformation of a country. Among the key indicators of socio-economic development such as growth rate of economy, literacy rate, birth rate, death rate and infant mortality rate (IMR), the literacy rate of the country is one of the most vital one as the rise and fall of others largely depend upon country's literacy
rate. In India, the increase in literacy rate over the years has led to low birth rate as well as low IMR and increased life expectancy. Education is an essential ingredient of prosperity because any person able to read the text knows what a difference it makes in their lives to have gone to school, to have learned to read, write and calculate. When social scientists try to prove that education is a cause of economic growth it turns out to be quite difficult to decide which came first, the chicken or the egg. What is more, even the basic terms such as “what is education” and “what is prosperity” become vast and cloudy terrains for the technical experts like economists, sociologists, education specialists and policy analysts.

Education under classroom school system has been the predominant way of organizing formal education throughout the 20th century. Economic growth, defined as the monetary aggregate GDP (gross domestic product) is used widely by economists to measure the economic performance of societies. The specific form of education system, characterized by universal compulsory classroom schooling, is an indispensable component of a society that is characterized by industrial growth. A wide range of economic, social and political reasons has been used to explain the hypothesis that education triggers growth. It is a hypothesis that rests on clarifying the role of one specific way of organizing learning, universal mass compulsory classroom schooling and the preponderant kinds of knowledge that emerge from this process, with the creation of one particular form of prosperity, typically summarized by the metric of gross domestic product (GDP).

Making investment in all the elements of a school system (teachers, buildings, text books, information technology, curriculum, supervision, testing, etc.) and then forcing young people to attend them (i.e. give up the income they might otherwise earn) is a necessary but not sufficient condition for expanding the gross domestic product of a society. The massive systems of universal compulsory schooling pioneered in the 19th century and “perfected” as well as extended to post-secondary education in the 20th century do not encompass all human learning.
What people learn and know, the practices that are informed and inspired by experience and reflection, arise from all kinds of human activity. However, the specific cognitive, behavioural and social knowledge, that is the basic result of a specific form of schooling introduced in the 19th century, played and continues to play a crucial role in spectacular feats of industrial development in developed countries.

During the past two centuries, the performance of industrial societies has been amazing when it comes to generating monetary wealth. GDP per capita in industrial nations exploded from around US$ 1,000 in 1820 to over US$ 21,000 by the late 1990s (Maddison 2001). Where industry triumphed so did GDP growth. In Western Europe GDP per capita jumped from just over US$ 4,500 to almost US$ 20,000. In Japan the leap was even greater, from around 2,000 US$ in 1950 to over 20,000 US$ in 2003. With the exception of China, where the recent growth spurt is impressive when seen from the perspective of such a low starting point, those parts of the world where the development of industrial society either stagnated or declined show much lower growth rates of GDP per capita.

The relationship between economic growth and education has been one of the central threads of economic analysis. Adam Smith in the 18th century and Alfred Marshall in the 19th century, two great economists addressed the question of how individual investments in education influenced the wealth of nations. Throughout the 20th century, modern economists have been attempting to develop empirical estimates of the relationship between education and economic growth (Krueger and Lindahl 2001). Some of the most famous names in economics of late 20th century earned the fame by studying the question of individual returns to investment in education. Mincer (1974), Becker (1964) and a long list of researchers inspired by their works have produced hundreds of books and papers on this issue. Much of this literature is highly technical in the sense that it uses formal econometric models to test hypotheses using empirical data. Both public and private returns to investment in education are positive—at both the
individual and economy-wide levels. The vast technical literature on this subject can be subdivided into two general areas:

1. The micro-economic literature looks at the relationship between different ways of measuring a person’s educational achievement and what they earn. Most studies show consistent results for what can be called the private or personal pay-off from education. For individuals this means that for every additional year of schooling they increase their earnings by about 10%. This is a very impressive rate of return.

2. The macro-economic literature examines the relationship between different measures of the aggregate level of educational attainment for a country as a whole and, in most cases, the standard measure of economic growth in terms of GDP. Once again, most studies find evidence of higher GDP growth in countries where the population has, on average, completed more years of schooling or attains higher scores on tests of cognitive achievement.

Each additional year of schooling appears to raise earnings by about 10% in the United States, although the rate of return to education varies over time as well as across countries (Krueger and Lindahl 2001).

The micro-economic literature has, for the most part, studied the relationship between two specific variables, i.e. the number of years of schooling and wages. Picking these two indicators is generally justified along two lines. One is that analyzing these two variables can provide insights into the basic economic hypothesis that people who go to school (number of years) are more productive (earn higher wages) than who do not go to school. The other justification is that data on years of schooling and wages are available for study while other indicators are not. There are a myriad of difficulties with testing this main hypothesis using these variables, leaving aside the fact that any data set will have errors and fail to capture the underlying causal factors that a social scientist is trying to isolate.
One of the difficulties is how to distinguish between the impact of differences in innate ability and of schooling when it comes to the incomes people earn. In other words, it could be true that people who go to school longer are just more able in some way that is unrelated to schooling. In this case it could mean that the variable that measures the number of years a person spends in school just captures differences amongst people related to their innate abilities and not something that is actually influenced by what happens to that person while they are in school. The fact that the variable for more years of schooling is correlated with higher income could simply mean that people who are more able can earn more; in this case schooling does not really matter.

Other similar types of problems arise from the use of years of schooling and income to test the hypothesis that more education makes a person more productive. For instance, more years of schooling may just represent another more important factor in the determination of income, like social differences related to parental background; or the fact that specific communities have access to specific networks (plumbers instead of bankers); or certain social groups have particular ways of speaking, dressing and behaving. Alternatively, there may be a social or signaling bias that leads to giving higher wages to people with more years of schooling (credentials like high school diplomas, university degrees, etc.) despite the fact that these people are not actually more productive (Bowles et al. 2001). In this case the problem with the economic research is not only that years of schooling may be unrelated to productive capacity but also that productive capacity may be unrelated to earnings. The longer a person goes to school the higher their earnings. Several recent works have been able to take advantage of advances in data collection to move beyond the quantitatively biased measure of years of schooling to look at the arguably more qualitative and accurate measure of cognitive achievement (Hanushek and Wöbmann 2007). While the time spent in school may or may not be related to acquiring knowledge or status that has a bearing on earnings it seems logical to think that a
person’s score on a test of cognitive achievement should have a bearing on how productive they are in the economy. Hanushek and Zhang (2006) looked at the evidence for a positive relationship between test scores and income. Their results, show that in places like the US and Chile the rate of return for higher test score results is roughly in line with findings from other studies on the returns for additional years of schooling, i.e. around 10%. Their estimates of the relationship between an individual’s years of schooling and income are somewhat lower after adjusting the basic equation to include literacy test scores.

The education system in India is much more improved these days and is one of the leading ones in the world. India has world's third largest higher secondary education system in terms of number of institutions. More and more students are going for higher education these days. It is also one of the biggest contributors to the economic growth of the nation. In addition to various government initiatives, the contribution of the private sector to the development of education sector has been significant during the last two decades. India's private education market was worth US$ 40 billion in 2008, which was expected to reach US$ 68 billion by the year 2012.

Poor quality of education in most government schools of India seems to be a general phenomenon today. Therefore, there has been a tendency among well to do families to get their wards admitted in these affluent private schools. The affluent parents with high income are reluctant to send their children to government schools where education is provided free of cost. Such trends lead to many questions relating to the efficiency and output of government schools in the country. Some of these questions are:

1. Are the government schools are slowly losing their relevance?
2. Are the education standard in government schools is gradually deteriorating?
3. Does these schools need to be improved both from infrastructure as well as curriculum point of view?
4. Whether the subsidies (free education) need to be relooked into?

On the other hand, the private schools charge substantial amount of money for admission and generally beyond the reach of the poor. But nobody knows about the quality of education being imparted in these schools. Often, most private schools work as an enterprise or industry and more appropriately are “money making entities” rather serving any social cause. The other arguments against the private schools include:

1. The private schools as compared to the government schools run for profit motive.
2. Private schools as compared to the government schools do more capital investment in areas such as sports, conference hall, information technology and library, thus giving a competitive advantage over their rivals and also earn extra selling points.
3. Private schools underpay the teachers as compared to the government schools.
4. Private education remains as a luxury product in the market, because the customer can afford to pay more for it and gets satisfaction of securing an alternative to the state education.
5. Infrastructure of private sector schools is inadequate as compared to the public sector schools.
6. Private school students outscore their government school counterparts in external evaluation (certification) as and when done by the boards.
7. Private schools as compared to the government schools are very easy to start.
8. Government schools are set up by the government, whereas private sector schools are set up by the rich entrepreneurs, unemployed educated people, trusts and missionaries, hence have less credibility.
9. Private schools have more disciplined work ethos and the kids are benefited out of that.
10. Parents prefer private schools because they offer a range of programmes. It helps students in their physical, spiritual and emotional development.
11. The training level of teachers in the government schools is at a much higher level than that in private schools.

The poor quality of the state-run school education system has led to demands that the state should withdraw from schooling, and that the government should only fund private initiatives or let the private sector take over schooling with public-private partnership initiatives. However, it has been argued that proper regulation of private schools and quality-driven reforms in public schools is a better alternative to PPP (Narayan 2010). At the same time, the central government and the states are pouring thousands of crores of tax money into education somewhere in the country. Therefore, it is required to review the state of our education systems, and explore and keep alive the possibility of public debate.

It is in the context of the perceived failure of the state-run education systems in both developing and developed countries that many of the assumptions behind these policies have come to be questioned in recent years. There are also increasingly loud voices that the private sector cannot deliver education to the poor and the needy and that the poor are not demanding “consumers” of education. Advocates of reform from this perspective demand a variety of responses ranging from outright privatization of education and the withdrawal of the state, to various versions of market friendly policies and PPP. It is an inevitable phenomenon of failed markets. It could be argued instead that these schools are the sign of failed regulation.

There is evidence accumulated over decades that certain markets where advantages of scale and location exist, and where short-term measurement of quality is problematic, the state needs to intervene and regulate intelligently. The standard response of the Indian state has been to choke supply through regulatory over skill. In due course, vested interests with political leverage manage to capture licenses and market power with disastrous consequences for quality and the ethical climate. In spite of the accumulated evidence, our regulatory systems in education have been very slow to adapt and learn from past mistakes. It is suggested that the
appropriate regulatory response to fear of profiteering by the private sector should not be to choke supply. On the contrary, choice, competition and diversity are properly understood and properly regulated. This can trigger a virtuous cycle and can help create a more solid base of human capital for society. An opening up of the market along with a government sponsored and well-conceived quality benchmarking process for private and public schools is an idea worth considering. This requires a greater faith on the part of the state in the capacity of citizens to make intelligent choices when provided with better information and greater choice.

Education is a field unlike other services and is too important to be completely left to the market. However, our mistrust of the market and our inability to learn from past regulatory failures has created a system far less effective than it could be.

Obviously, the above mentioned questions and arguments pertaining to relative efficiency of government versus private school system can satisfactorily be addressed if there is an analytical study encompassing a wide range of schools, and examining all the aspects of school education that would range from quality of teachers, infrastructure availability, financial resources, and governance. This would also need a comparative study encompassing all these diverse aspects of education between the government schools and the alternative private schools. However, there has been no work on any of these aspects, particularly the assessment of the quality and economics of education in either of these systems.

Sikkim, a small state merged with Indian union on 15th April, 1975 as the 22nd state of the country. During the last three decades, the state has made considerable progress in educational sector and has been providing free education to the children through a wide network of government schools. The Government schools include, Lower Primary School, Primary School, Junior High School, High School and Senior Secondary School. The Lower Primary schools include Nursery class to class II. Primary Schools include class III – class V, Junior High Schools from class VI – class VIII, Secondary Schools from class IX- class X and Senior
Secondary from class XI- class XII. As in 2005, Sikkim had 739 government schools spread throughout the state and boosts to provide quality education to the students of the state on an equitable basis.

In spite of the presence of a large network of government schools, during the past 5 years there is a steady growth of private English medium schools both in rural and urban areas of Sikkim. The state has 201 private schools and the quality of education imparted by these schools varies a great deal. However, privatization in the purest sense has not so far been achieved in Sikkim. Since 1990 there is considerable state support for private institutions, and where schools are pitted against one another in a cut-throat competition to attract pupils.

Rio (2004) described quality education as, “education system that has strict enforcement of norms like infrastructures, student/teacher ratio, student/classroom ratio, hours of teaching done by a teacher, hostels, health and hygiene”.

Given the growing competition between Government and private schools in school education sector of Sikkim, the state provided a perfect setting to undertake a comparative study to assess the relative efficiency of the two categories of schools. Therefore, the present work aimed at analyzing the (i) Economics of School Education, and (ii) Quality of School Education in a small but well-governed state Sikkim by studying the sample of 41 private schools and 75 government schools. The present research attempts to provide empirical data on some of the aspects of quality education. The study also intends to identify certain drawbacks prevailing in both the education systems to bring about qualitative changes in the education system of the state.

The specific objectives of the study were:

- To assess the quality of school education in Sikkim and examine the regional variations within the state.
• To compare the quality of education in private schools with that of the government schools by comparing infrastructure, facilities, teacher-student learning, and students’ achievement.

• To study the economics of education in private and government schools

• To correlate educational progress with state’s macroeconomic development.

The results of this study are expected to be helpful in the following ways:

1. Develop an insight into the economics and quality of education in an Indian state viz., Sikkim.

2. Contribute to the understanding and literature on economics and quality of education both in terms of processes and quantifiable outcomes.

3. Generate interest among the stakeholders to maintain quality of education in both Government and private schools.

4. Help the state in planning effectively for overall improvement of the education sector, with input of appropriate financial and human resources.