Technical Efficiency of Educational Institutions and its Impact on Chakma Tribes of Mizoram

Sukanta Mazumder
Associate, June 2022 (1st spell)
Assistant Professor,
Department of Economics,
Government Kamalanagar College,
Chawngte, Mizoram. 796772

INTRODUCTION: Illiteracy is a malady of the society, keeps darkening the society. Without literacy and without human development a country cannot develop and prosper. Education can bring the light and eliminate the darkness of the society from illiteracy. It is a common basic need for total development. Development is a discontinuous and spontaneous change in the stationary state which forever alters and displaces the equilibrium state previously existing, while growth is a gradual and steady change in the long run which comes about by a general increase in the rate of saving and population.

Education can bring the social change and this change on a grand scale is to be achieved without violent revolution through education. It is treated as human capital formation. It has a positive impact on economic growth and development. Government of India has taken initiatives through education policy to enlighten the society but still after 21 years of the 21st century it is not properly implemented totally. The light is still yet to complete focus to the mass of poorer, socially neglected class particularly scheduled caste and scheduled tribes. Mass of the people of the said is ignorant, not conscious and also not interested about their proper development.

Education is certainly the most important input for improvement of the quality of manpower and a very significant factor in achieving rapid economic development and technological progress. For improving the quality of manpower, modernization is essential in an educational process, which provides one of the most important channels of transition from traditional to modern sector. Literacy is, therefore, both the index and agent to modernization (Malhotra 1998).

The system of education has a determining influence on the rate of which the economic progress is achieved and the benefits that can be derived from it. Economic development naturally makes growing demands on human resource and in a democratic set up it calls for values and attitudes in the building of which the quality of education is an important element (Yadav).

For quite longer period, educationist and economists did not see eye to eye with each other and education was not considered as an investment. So its share in economic development was not recognized significantly. After that, the thinking and research findings have turned the tables and education is now considered to be an important ingredient of economic development. As a result of that the concept of human capital has been developed. Now, it is being increasingly felt that development takes place when human capital interacts with material capital in an efficient and effective way.

India's human resource base is one of its greatest core competencies. It is India's strength. If we can train an unskilled, if we can impart better skills to a skilled and if we create a more challenging environment for educated, as well as build avenues for economic activity in agriculture, industry and the service sectors, these Indians will not only meet the targets but also excel them (Kalam 1998).

NECESSITY OF THE STUDY

The present study attempts to focus on educational scenario and impact on the socio-economic life of the tribal society viz; on Chakma tribes in Mizoram. Chakma tribes are belonging to the backward region of the state Mizoram. The percentage of literacy is very low compared to the state percentage. The main cause of its backwardness is believed to be illiteracy and poor communication facilities. They are excluded from the main stream of the development process. The government of India has emphasized on inclusive growth and development that is includes the excluded in the development process. To what extent it is materialized for the Chakma tribes, this is the motto of the study, because socially and economically they are neglected.

THEORETICAL & CONCEPTUAL FRAMEWORK

Human capital is generally acknowledged as one of the most important resources for economic development. In fact, many studies have been carried out from exactly that viewpoint, to examine the effects of education on economic development, from both theoretical and empirical aspects. Lucas (1988) theoretically established the crucial role of human capital in the process of development. Becker (1964) and Schultz (1963) presented pioneering studies that addressed the role of education as an investment, assuming that the return to education is known perfectly. Roki Iwahashi (2007) presented a theoretical model that focuses on the role of general education in providing information about the future returns to different fields of education, and to understand how its demand is affected by the degree of economic development. It is suggested in the model that the demand for education, especially in its primary stage, depends largely on the variety of specific skills available at the regional labor market.

Efficiency in production is an empirical concept that involves the comparison of the maximum potential output, given a combination of inputs, with the observed output value. The closer (more distant) the observed output value from the maximum potential output, the higher the level of efficiency (inefficiency). This definition is referred to as technical efficiency, as opposed to economic efficiency where prices of inputs and output are involved. By concentrating on output measures, Debreu and Farrell (Debreu, 1951; Farrell, 1957) suggested an empirical measure of technical efficiency based on current output and the potential output that current input utilization should generate. A well established methodology called stochastic frontier production models (Aigner, Lovell, & Schmidt, 1977) is used to obtain these estimates.

CHAKMAS IN MIZORAM

Mizoram, a Union Territory of the Indian Union situated on the north-eastern corner of India was curved out of the then state of Assam on the 21st January, 1972 under the provisions of the North-Eastern Areas (Re-organisation) Act, 1971. It is bounded on the North by Cachar District of Assam and Manipur, on the East and South by Chin and West by Chittagong Hill tract of Bangladesh and the state of Tripura. Briefly, its boundary with Assam Tripura and Manipur extends 123, 66 and 95 km respectively.

Mizoram is geographically situated between $22^{0}20^{1}$ *and* $24^{0}27^{1}$ (N) latitude and $92^{0}20^{1}$ and $94^{0}29^{1}$ (E) longitudes. The tropic of cancer runs through the state. It curves an area of 8,143 sq. miles i.e. 21,087 sq. kms and is mostly a hilly ranges is about 900 meters. The boundary with Burma (Myanmar) extends 404 kms and with Bangladesh 318 kms. Thus, it occupies an area of great strategic importance, having a total boundary length of 722 km with Bangladesh and Myanmar.

Before the Christian Missionaries arrived in 1894, there was no formal education among the Mizo. The two pioneer Missionaries namely James Hisbut Lorrain and F.W. Savidge arrived in Mizoram on 11 January, 1811. Mizo language has no script of its own. These missionaries introduced the Roman script for Mizo language and formal education and created Mizo Alphabet on March 1894. The first Primary school was opened on 2 April, 1894.

Today, consciousness of the people in Mizoram for education is high growing fast. Apart from govt. educational institutions, a number of private schools have rapidly increased to meet the growing demand for better and high standard of education. After Mizoram had been under North Eastern Hill University, Shillong for 24 years, the Mizoram Central University came into being on 2 July, 2001.

The literacy rate has gone up from 81.23% to 88.49% in the past ten years. The state as per the 2001 census claims about 88.49% literacy. The percentage of literacy in rural and urban areas is 80.45 and 96.34 respectively. Male's literacy is 90.69% whereas female's literacy is 86.13%.

According to the census of 2001, has a population of 8,91,085. The number of male is 4,59,783 and female is 4,31,275. The land is inhabited by various clans such as Hmar, Lai (Pawi), Lusei, Mara (Lakher), Paite, Ralte who have many sub clans, who are collectively known as Mizos. Majority of the people are Christians. Besides, the Chakmas who have been settled in Mizoram is one of the inhabitants amongst them but they have their own culture, dialect and religion and not included in the Mizos.

The origin of the Chakmas is still shrouded in mystery. It is very difficult to locate their origin due to the absence of historical evidence. There are many contrasting theories regarding the origin of the Chakmas put forward by different writers. Some

held the view that the Chakmas were of Arakanese origin. Another theory given by J.P. Mils and R.H.S. Hutchison is that the Chakmas are the offspring of the union between the Moghul soldiers and the Arakanese women. It is a deniable fact that the existence of the Chakmas can be traced in Arakan region before the establishment of the Mughol rule in India. Another theory is that they came from Champa in Combodia[6]. Besides, there is another theory that the Chakmas belong to the eastern group of Indo-Aryan family.

Every race is nomadic until their search for home ends. A race settled till yesterday can be homeless tomorrow like Chakmas. The Chakmas in the Indian sub-continent are more or less like the Palestinians in the other part of the continent, in their destiny, and in their search for homeland. They had a stable home in the Chittagong Hill Tract, but now floating and driven from.

So far as the Chakmas in Mizoram are concerned, history takes us back to 1890's. A large section of Chakmas known as Annakya Chakmas separated from their counterpart in Arakan, were settled in the Chittagong Hill Tracts (CHT) in Bengal and annexed to the area later known as the Lushai Hills District of Assam. Nobody knows for sure how many Chakmas were there in the portion of the CHT annexed to the South Lushai Hills in 1890. The 1901 census shows that there were only 198 Chakmas in the entire Lushai Hills, presumably most in the South Lushai Hills.

The Chakma population in the Lushai Hills, which had been hardly 5088 in 1941 swelled upto a staggering figure of 11,435 in 1951. Chakma immigrants in Tripura and other parts of Assam were treated as refugees. A large number of them who has taken refuge in other part of Assam were shifted to NEFA (now Arunachal Pradesh).

In July, 1951, the Chakma who were the second largest community in the Lushai Hills District, were granted together with the Pawis and the Lakhers an autonomous regional council to administer their region which was named as the Pawi-Lakher Autonomous Region. Whatever fight had been made to attain a regional council; it was perhaps so made mainly by the Pawis and the Lakhers, and not much by the Chakmas. Nevertheless, they shared the autonomy.

In 1972, they started only 15 villages. 1996 they had 68 villages. During UT period i.e. 1972 – 1987, the total Grants-in-aid given by the Govt. to the Chakma Autonomous District Council amounted to Rs. 66,66,500.00 while during the statehood, they were granted at an average of Rs. 155,00,000/- a year. Satisfied with their achievements in 1986, the State Government' entrusted as many as eight subjects to them w.e.f. 1.9.86. Later in 1993, as many 20 functions were entrusted, which clearly stopped the antagonist of the District Council Administration from saying further that they have been failing and failing to the disappointment of the State Government.

The Chakma Autonomous District Council was formed by curving out from erstwhile Pawi-Lakher Regional Council under the Sixth Schedule to the Constitution of India. It started functioning from 29th April, 1972. The Chakma Autonomous District Council comprising 422 sq. kms, lies in the extreme Southern tip of Mizoram. It is bounded by Lunglei District in the North, Lai Autonomous District Council of Lawngtlai District in the East, Myanmar in the South and Bangladesh in the West. It is between 22 and 23 degree north longitude and 92 and 93 degree east latitude.

The topographical features of the Chakma Autonomous District Council are characterized by gentle sub-hill ranges running from the north to the south. These ranges are covered with evergreen forests. However vast flat land is available in the river valleys of Thega and Tuichawng also at the root of Rajmandal, the highest peak of the Chakma Autonomous District Council. The climate of Chakma Autonomous District Council is extreme in summer and winter. The Chakma practice shifting cultivation called jhum.

The Chakmas believed in Buddhism.

The Chakma Autonomous District Council area is the most backward region in Mizoram. The percentage of literacy is very low. The main cause of its backwardness is believed to be illiteracy and poor communication facilities.

LITERATURE SURVEY:

Based on the experience of educational planning, Naik (1965) has presented a masterly analysis on some valuable ideas for the new strategy in elementary education. Some of the important aspects of the new strategy are (a) extensive education aimed at family planning; (b) development of programmes of mass education; (c) the adoption of a large class-size or teacher-pupil ratio; (d) larger allocation of funds for elementary education; (e) effective measures to check wastage and stagnation; and (f) improvement of the teaching personnel.

Regarding human capital Schultz (1981) observed that only that part of skill and knowledge which has productive capacity is capital. For improvement in the quality and productivity of labour investment in human capital in the form of consumption of education, health service, on the job training all these are important.

According to Sodhi (2000), education effects economic development in two ways, i.e., direct and indirect. Directly it can be observed in productivity, employment, composition of labour force, division and mobility of labour etc. Indirectly it affects thrift, saving, limitating in the size of the family and the formation of right kind of attitudes and skills.

Kalam (1998) writes about the potentiality of Human resource in India. He also mentioned that maximum people in India is suffering from poverty due to lack of education. Higher the education higher is the income.

Human capital is formed through the process of education. Mazumder (1984) argued that the people could view education in human capital as investment or as consumption. People make investment in education either for processing education or for providing education.

The World Bank recognized in 1963 that spending on education is not simply consumption but is investment in human capital, and that education is not only a basic human right but also a means of enhancing the productivity capacity of developing countries and increasing the profitability of investment in physical capital and basic infrastructure. – Psacharopoulus (1991).

In his analysis Sen observed that the economic returns to primary education in developing countries are typically very high. He also concludes that childs nutrition and survival is influenced by females literacy. Aside from private incomes public action is a crucial determinant of educational achievements. The introduction of a market economy does not mean intellectuals hawk in the streets.

Thomas Langer founds that the need of value orientation in management profession and management education has been realized in India. Any human resource planning process must take into account the level of development of each country. There cannot be universal technology transfer and human resource development strategies applicable in all situations. Each country and each organization needs to develop and train its people with different skills to suit the requirements of traditional and modern technologies.

Prakash (1999) discusses exhaustively the various approaches to planning and offers a concrete concept of educational demand. The concept of educational demand has never been propounded though analysts and policy maker have often talked about it. The study highlights the subtle differences between the 'aggregate private demand for education, and social demand for education.

OBJECTIVES:

- To examine the demand for education and gather a distinct knowledge regarding the various factors determining such demands.
- To estimate the technical efficiency for school that belongs to the Chakma dense area.
- To examine the impact of education on economic life of Chakma tribes.

HYPOTHESES:

(1) Demand for education is not significantly changing over time for Chakma tribes.

(2) Demand for education is not significantly affected by socio-economic factors.

(3) Educational institutions belonging to the Chakma dense area are not technically efficient.

(4) There is no significant impact of education on economic life of Chakma tribes.

METHODOLOGY & SOURCES OF DATA:

The data of the proposed study will be collected from both primary and secondary sources. Primary data collection will be divided into two parts – data collection from Chakma tribes and data collection from educational institutions. Primary data will be collected through a questionnaire from household and schools belonging in Chakma dense area separately. Both types of primary data will be collected by using multi-stage stratified random sampling. In the first stage, three major Chakma prone districts will be selected from the state. In the second stage, 15 villages will be selected proportionately from these three districts. In the last stage, households and institutions will be selected randomly. More than 300 household would be the sample size and for educational institutions 10% would be the sample size for this study. Secondary information will be collected from different Govt. publications, books and journals, publications of semi govt. organization & institutions, reports of the Chakma Autonomous District Council. For data analysis, econometric and statistical tools and techniques like regression analysis, descriptive statistics can be used. For measuring technical efficiency, frontier production can be used in the proposed study. Data on school outcomes, characteristics and resources can be used for measuring technical efficiency.

PLAN OF CHAPTERS:

For this study, the tentative chapters can be framed in the following way. The first chapter will be introductory chapter, which contain background, objective, hypotheses, methodology, and sources of data. In the second chapter, there will be an extensive literature survey. The content of third chapter will be on Educational Development and status of Chakma tribes. In fourth chapter, Impact of Education on Social and economic life of Chakma tribes will be discussed. The content of chapter five will be on determinants of education. The sixth chapter will be on measuring

technical efficiency of schools belonging Chakma based area. Chapter seven will be on Summary and Conclusion and last chapter will contain Bibliography.

REFERENCES:

1. Chakraborty P. (1997): "Chakma in Mizoram – A Great Leap in Transition"; Silver Jubilee Souvenir Published by Chakma Autonomous District Council, Mizoram.
2. Sodhi, T.S. (2000): "Philosophical & Sociological Foundation of Education" BAWA Publication, Patiala.
3. Kalam, Abdul A.P.J. and Y.S. Rajan, (2002): "India 2020, A Vision for the New Millennium", Penguin Books, New Delhi.
4. Psacharopoulos George and Maureen Woodhall (1991): "Education for Development, An Analysis of Investment Choices", Oxford University Press for The World Bank.
5. Mujummil, Mohd. (1997): "Education in National Plan Priorities in "Rural Development and Poverty Alleviation, Infrastructure to Rural Development" by Subah Singh Yadav & R.K. Gurjar (Ed.), Vol. I, Pointer Publishers, Jaipur.
6. Madan, B.R., Thomas Cangan & G.P. Roy (1999): "Human Resource Development, A Value based Approach", Pointer Publishers, Jaipur (India).
7. Dreze Jean and Mrinalini Saran (1999): "Primary Education and Economic Development in China and India : An Overview and Two Case Studies" in "Choice, Welfare and Development : A Festschrift in honour of Amartya Sen" by K. basu, P. Pattanaik and K. Suzumura (Ed.); Oxford University Press.
8. Virmani B.R. and Kala Rao (1999): "Economic Restructuring, Technology Transfer and Human Resource Development," Second edition. Response Books, New Delhi.
9. Prakash, Subiri (1999): "Educational Planning", Gyan Publishing House, New Delhi.
10. Malhotra, O.P. (1998): "Tribal Education, Impact of Education on Tribal Life and Adjustment: A Case Study of the Microbars", Cosmo Publication, New Delhi (India).
11. Majumdar Tapas (1993): "Investment in Education and Social Choice", Orient Longman.
12. Schultz, W.T. (1981): "Investing in People the Economics of Population Quality", Hindustan Publishing Corporation, Delhi.
13. Ministry of Human Resource Development, National Human Development Report 2001, New Delhi.
14. Jonhnson H.G. (1971): "Towards a generalized capital accumulation approach to economic development" in "Economics of Education" by Mark Blang (Ed.), Penguin Books Ltd., England.
15. Nayek J.P. (1965): "Elementary Education in India - The Unfinished Business", Asia Publishing House, New Delhi.
16. Debreu, G. (1951): "The coefficient of resource utilization", Econometrica, 19(3), 273–292.

17. Farrell, M. (1957): "The measurement of productive efficiency", Journal of the Royal Statistical Society, Series A, General, 120(Part 3), 253–281.
18. Aigner D. J, Lovell, C. A. K, & Schmidt, P (1977): "Formulation and estimation of stochastic frontier production function models", Journal of Econometrics, 6, 21–37.

19. Stephen J. Conroya & Nestor M. Argueab (2007): "An estimation of technical efficiency for Florida public elementary schools", Economics of Education Review.
20. Roki Iwahashi (2007): "A theoretical assessment of regional development effects on the demand for general education", Economics of Education Review 26, 387–394.

In last few months I have done the following works:

1. Review of literature.
2. Collection of materials from internet.
3. Preparation of questionnaires.
4. A pilot survey in the schools in Kamalanagar under CADC.
5. Visited some of the offices and meet some of the persons in CADC for collecting the secondary data.

A few sample of review of literature is given below:

LITERATURE SURVEY:

Based on the experience of educational planning, Naik (1965) has presented a masterly analysis on some valuable ideas for the new strategy in elementary education. Some of the important aspects of the new strategy are (a) extensive education aimed at family planning; (b) development of programmes of mass education; (c) the adoption of a large class-size or teacher-pupil ratio; (d) larger allocation of funds for elementary education; (e) effective measures to check wastage and stagnation; and (f) improvement of the teaching personnel.

Regarding human capital Schultz (1981) observed that only that part of skill and knowledge which has productive capacity is capital. For improvement in the quality

and productivity of labour investment in human capital in the form of consumption of education, health service, on the job training all these are important.

According to Sodhi (2000), education effects economic development in two ways, i.e., direct and indirect. Directly it can be observed in productivity, employment, composition of labour force, division and mobility of labour etc. Indirectly it affects thrift, saving, limitating in the size of the family and the formation of right kind of attitudes and skills.

Kalam (1998) writes about the potentiality of Human resource in India. He also mentioned that maximum people in India is suffering from poverty due to lack of education. Higher the education higher is the income.

Human capital is formed through the process of education. Mazumder (1984) argued that the people could view education in human capital as investment or as consumption. People make investment in education either for processing education or for providing education.

The World Bank recognized in 1963 that spending on education is not simply consumption but is investment in human capital, and that education is not only a basic human right but also a means of enhancing the productivity capacity of developing countries and increasing the profitability of investment in physical capital and basic infrastructure. – Psacharopoulus (1991).

In his analysis Sen observed that the economic returns to primary education in developing countries are typically very high. He also concludes that childs nutrition and survival is influenced by females literacy. Aside from private incomes public action is a crucial determinant of educational achievements. The introduction of a market economy does not mean intellectuals hawk in the streets.

Thomas Langer founds that the need of value orientation in management profession and management education has been realized in India. Any human resource planning process must take into account the level of development of each country. There cannot be universal technology transfer and human resource development strategies applicable in all situations. Each country and each organization needs to

develop and train its people with different skills to suit the requirements of traditional and modern technologies.

Prakash (1999) discusses exhaustively the various approaches to planning and offers a concrete concept of educational demand. The concept of educational demand has never been propounded though analysts and policy maker have often talked about it. The study highlights the subtle differences between the 'aggregate private demand for education, and social demand for education.

There are so many literatures on this area. Some of the literatures are reviewed in the following:

Bennett (1967) discusses some problems on Educational change and economic development. The basic objective of this study is to check the level of economic development depends on (a) the greater the per capita rate of general secondary education, (b) the greater the per capita rate of vocational education and (c) the greater the ratio of vocational to general education or not. This paper deals with the correlation between several measures of the structure of secondary education and selected aspects of economic development. He found that over all low correlation between the absolute level of general secondary education per-capita and indicator of economic growth. There is a high positive correlation between growth in technological education and economic development. It does not impute a causal role to either economic or educational variables. This study is based on empirical data from 71 countries. For the educational variables, data were collected from the most recent UNESCO volume on comparative education. The main limitation of this study is that the data were all for one year periods, but there was some slight variability in the dates referred to. One serious source of error must be considered at this point; that is, none of the countries compute "secondary education" over the same number of years.

Conroy and Arguea (2007) analyzed the technical efficiency for Florida public elementary schools. Their objective in this paper is to concentrate on estimating technical efficiency to provide estimates that allow us to compare schools in terms of a distance measure from a theoretical boundary representing the best a school can do with given resources. They used the stochastic frontier production models to obtain these estimates. The analysis of inefficiency in the Florida school system using a stochastic frontier model proceeded in two stages. In the first stage, they estimated a stochastic frontier function to obtain inefficiency scores for all the schools in their sample. In the second stage, they estimated a model to explain the behavior of the inefficiency scores. They estimate two variations of the stochastic frontier model using math scores and reading scores, and as a consequence they estimate two inefficiency scores for each school. The specification follows a Cobb-Douglas functional form. Therefore all variables, except dummy indicators, are measured in natural logs. From the results it is observed that higher level of teacher experience exert a positive effect on mean student achievement. The interaction of expenditures per student and the ratio of free-lunch eligible students seem to have a negative effect on performance. The free-lunch eligibility ratio are likely to be proxies for lower wealth and education of parents, which has been found to be negatively associated with educational outcomes.

Vaduganathan (2005) in "Do perceived benefits or costs drive the demand for primary education in Karnataka" uses a modern education production function framework in the estimation of a theoretical model to explain the primary drivers of enrollment and completion of primary school for children of 6 to 14 years of age group. The main hypothesis is that the demand for primary education, as measured by

enrollment and completion rates, in Karnataka is influenced primarily by perceived benefits rather than costs. Enrollment and completion rates are important determinants of the demand for education. In this study, these two variables were treated as a function of the opportunity costs and benefits of associated with education. These benefits and costs were represented as streams of inputs associated with block, teacher/classroom, and school characteristics. The analysis of this paper is limited only to government aided public schools across urban and rural areas in each block.

Due to the lack of information on school attendance records and the importance of getting perception of the time horizon of investment in education, Bedi and Marshalls (2002) theoretical model is adopted in this paper to account for these issue.

Liu. Jin-Tan , Hammitt, K.James, Jeng Chyongchiou (2000) on "Family background and returns to schooling in Taiwan" examined the effects of family background on the wage function in Taiwan. They estimated a series of wage equations in which they begin with the schooling of the worker and socioeconomic variables as regressors, and sequentially add the schooling of the worker's father, mother and wife. They found direct effects of family background on wages in the private sector but not in the public sector. Family connections may be influential in obtaining access to public sector employment, but have a smaller quantitative effect on public sector wages than on private sector wages because public sector wages are less variable or less sensitive to productivity differences. The found the results that the father's education is more important than the mother's, which differs from the findings of Heckman and Hotz (1986) for Panamanian men.

They found that the wife's schooling has a larger effect on a worker's wage than the schooling of the worker's own parents. The wife's education is correlated with her parents education, the parent of a well educated wife may be more able to assist their son-in-law in obtaining a desirable job. Finally, they found the potential role of measurement error in schooling may explain part of the decrease in returns to schooling when family background variables are included. They restricted their analysis to married male (non-agricultural) workers living in the same household as their parents. Restriction of the sample to married male workers living with their parents may create a selection bias (only about 15% of married male workers live with their parents) but data on parents' education is not available for other workers.

Kuo and Ho (2007) examined the cost inefficiency of the bureaucrats in Taiwan's public universities both before and after the reform in relation to the budget mechanism that shifted to the University Operation Fund from the traditional budgeting system for public institutions. The original purpose of the university operation fund's implementation was to reduce the government's financial burden by increasing cost efficiency in the higher education institutions. There are three differences that distinguish from the traditional budget regime. First, government appropriations went from full funding to partial appropriations. Secondly, the universities can now retain surplus resources. Finally, the regulations on the use of funds raised by each institution itself are now less cumbersome. They developed cost inefficiency effect model by using stochastic frontier function and multiple product trans-log cost function. They found the traditional budget regime of public enterprises is inferior to that of trust funds from a cost efficiency stand point. From the stand point of government more

consideration should be given to the specific type of monetary mechanism and to the amounts of funds under the control of administrators. This paper is not free from limitations. There is a lack of data on quality of the education in research output produced by higher education institutions. The effect of university operation fund may be non-linear.

Das and Das (2014) have investigated technical efficiency of higher education institutions (HEIs) in Barak Valley by using stochastic frontier analysis (SFA) and compared the technical efficiency (TE) scores of National Assessment and Accreditation Council (NAAC) accredited HEIs with other HEIs and then compares the rank of the HEIs with respect to their TE scores and performance. The study reveals that NAAC accredited HEIs are more technically efficient and performing better than non-accredited HEIs.

Das et al., (2014) have examined the relationship between academic performance of the students of higher education with socio-economic background and their past academic performance. They have further analyzed the differences in the achievements among different socio-economic groups. The findings of the study reveal importance of both socio-economic and academic backgrounds of the students in determining the performance of the students in higher education; however the academic factors are more dominant than socio-economic factors.

Chakraborty et al., (2001) have used both the stochastic and non-stochastic production function approach to measure technical efficiency in public education in Utah for 40 schools districts in Utah for academic year 1992-1993. the standardized test

score for 11th grade students is used as a measurement of school output, and two types of inputs are included.

Corazon and Cabanda (2009) measures the technical efficiency of 16 selected private colleges and universities in Metro Manila, Philippines. They use data envelopment analysis (DEA) by taking academic data for the period 2001-2005. The study shows that the private higher educational institutions in Metro Manila are 81 per cent efficient based on an input-oriented variable returns to scale.

Tyagi et al. (2009) have measured the efficiency of 348 elementary schools of Uttar Pradesh state in India by using a linear programming based technique (DEA). They use four different models by taking constant returns to scale in production and find that in the first model 11 schools are efficient, in second, third and fourth model 33, 51 and 67 schools are efficient respectively. The study also provides school-wise planning information to policy makers.

Soteriou et al. (1998) use the methodology of DEA to assess the efficiency of secondary schools in Cyprus and provides recommendations for improvement to inefficient schools and discusses managerial implications. The study reveals that there exist no significant differences in efficiency scores between schools operating in rural areas compared to those operating in urban areas and teachers' quality is positively influencing factor

THEORETICAL & CONCEPTUAL FRAMEWORK AND RESEARCH METHODOLOGY

The present chapter explains the theoretical framework related to measurement of technical efficiency of the educational institutions and the concepts related to the present study.

In this section important concepts related to measurement of technical efficiency and demand for higher education are discussed in a sequential manner.

The term efficiency means productive capacity of the producing unit in producing their output and now a day's efficient management of resources in every sector is a central issue from the perspective of our scarce resources from the perspective of management.

Allocative efficiency: Allocative efficiency refers to the ability to combine inputs and outputs in optimal proportions in the light of prevailing prices, and is measured in terms of behavioral goal of the production unit like, for example, observed vs. optimum cost or observed profit vs. optimum profit.

Technical efficiency: Technical efficiency is measured as the ratio between the observed output and the maximum output, under the assumption of fixed input, or, alternatively, as the ratio between the observed input and the minimum input under the assumption of fixed output.

Approaches to study Technical Efficiency

Both technical and allocative efficiency can be measured by the following two main approaches

Input Approach: The input approach if one is considering the ability to avoid waste by producing as much output as input usage allows, i.e. we evaluate the ability to minimize inputs keeping outputs fixed.

Output Approach: The output approach if one is considering the ability to avoid waste as little input as output production allows, i.e. we evaluate the ability to maximize outputs keeping inputs fixed.

The questionnaire which I have prepared are as follows:

The questionnaire is meant for the purpose of fulfillment of the program of associateship of IIAS, Shimla The information provided by the respondent will be kept secret and will be used for academic purpose only.

1.Name of the respondent:

2.Address:

3.Religion:

4.Population of the family:

Male		Female	
Below 6years		Below 6years	
6-14years		6-14years	
14-25years		14-25years	
25-50years		25-50years	
Above50years		Above50years	

5.Educational scenario of the family:

Male		Female	
Below matric		Below matric	
Matric		Matric	
10+2		10+2	
Graduate		Graduate	
Post-graduate		Post-graduate	

6.Employment scenario of the family:

Sl.no.	Name	M/F	Qualification	Place of employment	Monthly earning
1					
2					
3					
4					

7.Students in the family:

Sl.no.	Name	Class	Institution
1			
2			
3			
4			

8.Distance of educational institutions (in Kms):

L.P. School	
M.E. School	
High School	
Higher Secondary	
College	
University	
ITI	
Polytechnic	
B.Ed. College	

9.Total Earning of the family from different sources:

Agriculture	
Service	
Business	
Any other	

ENROLLMENT OF STUDENT

Year	IX			X		
	Boys	Girls	Total	Boys	Girls	Total

2021						
2020						
2019						
2018						
2017						
2016						
2015						
2014						
2013						
2012						

RESULT

Year	IX						X					
	Boys		Girls		Total		Boys		Girls		Total	
	A	P	A	P	A	P	A	P	A	P	A	P
2022												
2021												
2020												
2019												
2018												
2017												
2016												
2015												
2014												

ENROLMENT OF STUDENTS

Year	XI			XII		
	Boys	Girls	Total	Boys	Girls	Total
2021-2022						
2020-2021						
2019-2020						
2018-2019						
2017-2018						
2016-2017						
2015-2016						
2014-2015						
2013-2014						
2012-2013						

RESULT

Year	XI						XII					
	Boys		Girls		Total		Boys		Girls		Total	
	A	P	A	P	A	P	A	P	A	P	A	P
2021-2022												
2020-2021												
2019-2020												
2018-2019												
2017-2018												
2016-2017												
2015-2016												
2014-2015												
2013-2014												

Year	BA 1st year			BA 2nd year			BA 3rd year		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2021-2022									
2020-2021									
2019-2020									
2018-2019									
2017-2018									
2016-2017									
2015-2016									
2014-2015									
2013-2014									
2012-2013									

ENROLMENT OF STUDENTS:

Year	BA 1st year						BA 2nd year						BA 3rd year					
	Boys		Girls		Total		Boys		Girls		Total		Boys		Girls		Total	
	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P	A	P
2021-2022																		

2020-2021																		
2019-2020																		
2018-2019																		
2017-2018																		
2016-2017																		
2015-2016																		
2014-2015																		
2013-2014																		

Result of Matric / H.S. / Degree

Year	**Boys**				**Girls**			
	1st Div.	2nd Div.	3rd Div.	Comp.	1st Div.	2nd Div.	3rd Div.	Comp.
2021-2022								
2020-2021								
2019-2020								
2018-2019								
2017-2018								

2016-2017								
2015-2016								
2014-2015								
2013-2014								

TABLE- : No. of teachers according to their qualification & experience.

Qualification	No. of male teacher				No. of female teacher			
	Less than 5yrs	05-10 years	10-15 years	More than 15yrs	Less than 5yrs	05-10 years	10-15 years	More than 15yrs
Matric								
H.S.								
H.S. + B.Training								
B.A.								
B. Sc.								
B. Com.								
B.Ed.								
M.A.								
M.Sc.								
M.Com								
M.Phil.								
Ph.D.								

SCHOOL INFORMATION BLANK

(To be filled by the investigator)

GENERAL INFORMATION

a) Name of the school:
b) Place: c) urban/sub-urban/rural:
d) Address: village/Town: P.O.:
P.S.: Dist.: State:
Pin:

PHYSICAL FACILITIES:

1. Your institution is a) Provincialized b) Deficit c) Adhok Grant
d) Government Aided e) Private f) Any other…….
2. Your institution has a) Own building b) Rented building c) Any other
……
3. What is the type of of your school building? a) kuchcha b) pucca c) mixed
4. Whether your school is a) Girls school b) Boys school c) Co-education
5. What is the number of rooms in your school? ……..
6. What is the number of classrooms in your school? ……..
7. Are the same classrooms used for different classes? Yes / No
8. What is the number of staff rooms in your school? ……
9. Do you have separate blackboard for each classroom? Yes / No
10. Is there any toilet facility in the school? Yes / No
11. Is there any drinking water facility in the school? Yes / No
12. What kind of furniture do you provide to your student in the classroom?
a) Wooden benches b) Individual desk and chair c) Double desk and chair d) No furniture
13. Is there any playground in your school? Yes / No
14. Is there available instrument for play in the school? Yes / No
15. Does the physical training imparted to the learners? Yes / No
16. Which of the following activities does the school provide?
a) Outdoor games b) Indoor games c) Social service d) Scout/Guide e) Educational excursion f) Picnic
17. Do you have computer in your school? Yes / No
18. If no, do you think that computer important for the students? Yes / No.
19. Do you provide mid-day meal in the school? Yes / No
20. If yes, it is provided a) Once in a week b) Once in a month c) Twice in a month d) Sometimes e) Never
21. Do you have school uniform for the students? Yes / No

22. Do you provide any financial help to the poor children from your school fund? Yes / No

23. How much fund you get from government a) Per month Rs. …….. b) Per annum Rs. ……..

TEACHER & STUDENT

1. How many types of teacher are there in your school?

a) Permanent …… b) Temporary …….. c) Adjusted …….. , where from? ……

2. What is the number of sanction post in the school? ……

3. What is the number teacher working in the school? ……..

4. What is the number of male teacher in the school? ……..

5. What is the number of female teacher in the school? ……..

6. What is the number of trained teacher in the school? …….

7. What is the number of non-trained teacher in the school? ……..

8. If teachers are deputed for training whether there is any substitute provided by the government or managing committee?

Yes / No

9. Whether school is shift system or not? Yes / No.

10. Whether school followed own timetable a) Own timetable b) Government timetable

11. Do the student leave the course or the school before finishing the school? Yes / No.

12. What is the cause of leaving school?

a) Financial problem b)Physical problem/Illness c) Lack of willingness d)Communication problem e)Unaware of parents f)Fear g)Home work h)Parents illiteracy i)Others

13. When your school comes under Sarva Siksha Aviyan ? ……

14. What are the facilities or resources provides by the SSA? ……
……
……
……

15. Do your school functions under SSA schemes? If so how it operates? …….

16. How many Para teacher or shiksha sarathi in your school ? …….
17. Does the Para teacher obey their duty properly? Yes /No.
18. Total number of students in your school? (This session) …….

TEACHING AND LEARNING MATERIALS:

1. Which of the following is available in your school/College?
a) Abacus b)Globe c)Charts d)Black board/chalk/duster e)Still picture f)Motion picture g)Map h)Tape recorder i)Radio j)T.V. k)Projector l)Any other teaching aid……
2. Do the teacher use the teaching aids in the classroom which are available? Yes / No.
3. Whether improvised teaching aids available in the school/College? Yes / No
4. Do your school provide library facilities to the children? Yes / No.
5. Whether teachers handbook are available or not? Yes / No.
6. Whether books are available in the library or not? a) Available b) Not-available
7. Are the pupils get free text book in your school? Yes / No.
8. What books are followed by the students? a) Text book b) Note book

EVALUATION PROCEDURE:

1. Your school conducts examination a) Monthly b) Quarterly c) Half yearly d) Annually
2. Your school gives rank through a) Marks b) Grade c) Both
3. How are the students promoted from one class to another? On the basis of performance
(a) in annual examination b) in half-yearly and annual examination c) assessed continuously
4. Who assess the answer papers of the pupils of the school? Teacher of (a) same school b) the other school
5. Has your institution ever faced any disciplinary problem at the time of conducting examination? Yes / No.

HEALTH AND HYGIENE

1. Do you have first aid box in your school? Yes / No.
2. Do you have form any committee among the student to check the health of them? Yes / No.
3. Does your school provide students medical checkup? Yes / No.

4. If yes, it is provided a) Once in a month b) Twice in a month c) Once in a year d) Never

5. Do you organize any awareness program about health and hygiene in the school? Yes / No.

6. Do you have proper sewer facilities in the school? Yes / No.

7. Do you get any fund from Government for medical checkup of the students? Yes / No.

8. How many students left school for their illness in a year? a) 5% b) 10% c) Nobody

9. How many students are irregular for their illness in the school? a) 5% b) 10% c) 15% d) Nobody

10. Do you want to include yoga in the curriculum for all round development of the children? Yes / No.

CURRICULUM

1. Do you think that the present curriculum is sufficient for the students? a) Sufficient b) Not sufficient

2. Do you want to bring change in the present curriculum? Yes / No.

If yes, how

……

……

……

……

3. Do you think that the children are interested in present curriculum? Yes/ No

4. Are you member of curriculum construction committee? Yes / No.

5. Do you think that the present curriculum should revise? Yes / No.

6. Do you feel the need of vocational education in the curriculum? Yes/ No. (Please give some reasons)

7. Do you feel that religious education should have to be included in the curriculum? Yes/ No

8. Anything special for female students? (Please mention)……

……

……

9. Anything extra for male students? (Please mention)

……

……..……

……

10. Any co-curricular activities? (Please mention)……
……
…….....

While doing the pilot survey I found that most of the schools don't have any systematic record of the enrollment and final results of the students.

But I found that the Principals, Head masters and some of the teachers are very helpful and trying their best to provide the most accurate information.

All together there is only one degree college(deficit) in CADC and Two higher secondary schools- one private and one government.

Total number of high school are 09 (government- o3, private 06), middle school are 32 (government 28, private 04) and Primary school are 76 (government-72, private 04) in CADC.

I have done my pilot survey in the college, 02 higher secondary schools, 04 high schools, 04 middle schools and in 03 primary schools.