CHAPTER II

REVIEW OF RELATED LITERATURE

1) PART ONE

WORK DONE PREVIOUSLY IN

UNITED STATES OF AMERICA

2.1.1. The problem of cost and quality has interested a number of researchers for the last 60 years. Though the question has interested the researchers very recently, it seems through proper study of the problem that, there have been various opinions regarding the cost and quality of education; as such the term 'quality' relates to many definitions according to researchers. Hence, the researchers are free to define the term 'quality' according to their own presumptions.

2.1.2. It will be necessary to have an account of the work done previously, in this branch, as such a brief account of the work done previously in the United States of America. Although, all the studies give different opinions, regarding the cost and quality productivity, they have measured different levels of studies in education.
2.1.5. Aryes (1920) has for the first time attempted to put forth a report of a study of school expenditures and of certain provisions in education in the United States of America. In his index, Aryes used 10 items, 5 of which had to do with financial arrangement, 5 of which had to do with tangible characteristics of the program, such as length of school term. He found oft that two sets of factors had an intercorrelation of .78. He concluded that, there is relationship between expenditure and results in education. He could not prove that the higher paid teacher is individually more skilled than the lower paid one; but as salaries increase, attendance improves, and more pupils are found in the high schools. As salaries increase, expenditure for purpose other than salaries also increases, and this results in better buildings and equipment. He concluded in general that, the purely educational items of the index tend to increase as the financial items grow larger even where there is no functional connection between two sets of data.

1: Aryes, Leonard F., An Index Number of States School Systems; New York, Russell Sage Foundation; 1920 Pp. 54-56.
2,1,4. B.S. Bloom and Charles R. Statler in 1957, in their study concerned with the facts associated with educational achievements are measured by standard tests of 'General Educational Development', in English Compositions, the Social Studies, The National Service, Literature and Mathematics. These tests were designed to measure as directly as possible in attainment of some of the ultimate objectives of entire program of general education. These tests were given to 56,550 students in 1945 by Prof. E. F. Lindquest of the State University of Iowa and 58,773 in 834 high schools in 48 states in 1955 by B.S. Bloom.

2,1,5. Thus measured, they found a relation between levels of expenditure and educational quality. On the basis they calculated that, the levels of educational outcomes of the public schools, as measured by the performance of the high-school seniors on the tests is related to the level of educational im-put in terms of financial support for education and the value placed upon education, as reflected by the educational status of adult popula-
tion. When there is increased financial and other support for education, improvement in living of learning of the students in a state is likely to be increased.

2.1.6. The Committee (1957) of school education of the Connecticut Citizens for the Public schools indicated that more money per state does not necessarily provide better education. It stressed on the necessity to isolate the crucial factors controlling the quality of education.

2.1.7. Farrell (1937) found a strong relationship between quality and expenditure. However, he has defined the quality as the attracting power of the school, the training and experience of teachers, pupil-teacher ratio and the length of the school term. He has basically formed his opinion about the quality of instruction as measured out in the high standard schools. He has concluded, there is a very strong relationship between the total current expenditure and the educational efficiency.

2.1.8. Ginsburg and Bray (1955), in their study 'The Uneducated,' threw a great deal of light on the relation of at least a minimum of education to

3. Connecticut Citizens for Public Schools, Committee for Financing Education, A Study of Factors Related Achievements in Public Schools., Hartford; Connecticut Citizens for Public Schools (189 0; Lott, Street) June 1937, P.7


acceptance into; and success in the military forces in times of war. They found that the twelve states with the lowest expenditure per pupil in states in 1939-30 accounted for five out of every seven rejectees. Complimentary to this, they detailed the success of the army in bringing illiterates up to operational efficiency by a comparatively brief period of intensive schooling. However, this was a study for measuring efficiency of military personnel in the world war II.

6. Grim (1933) studied educational opportunities in the relation to their costs in 26 elementary school districts in Illinois States. Mostly he studied the levels of expenditure and the tests of pupils' achievements and compared them. He established a direct relationship between cost and quality in education.

7. Maine School Finance Commission (1934) studied the financing of public schools of Maine and reported that high expenditure schools generally made more adequate provisions for text books, institutional supplies and libraries. This evidence is of some value: it criticised


its assumptions that enough trained teachers result in better educational returns. However, it has not measured the actual educational returns.

2.1.11. The presumption from the results from the studies reviewed by Mort, Rousser, Polly (1960) is that the relationship is strong. They have summarized their findings in the following three vital points of their review of twenty six studies:

1) Regardless of the method of measuring quality a relatively strong relationship holds through all levels of expenditure as yet experienced in Public education, from the lowest as exemplified by Mississippi, through the middle group, as exemplified by West Virginia, Maine Rhode Island, Illinois and Pennsylvania, to the highest as exemplified by New York and New Jersey.

2) Even the highest expenditure Public Schools do not begin to establish the point, if there is one, which the relationship drops off, and no school is poorly supplied, as to be taking in important value.

3) The relationship appears to be accelerating one, those who spend more, tend to add the range of education on the one hand, and on the other

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to do a better job on the focusing on the needs of children and young people through the range of ability.

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2.1.18. Mort and Cornell, studied sixty seven items in Pennsylvania. Out of these sixty seven there were only two somewhere near as closely related to school quality as current expenses per weighted elementary school room unit. Those two were percentage of business and professional workers (.59) and the percentage of sampling of the public with a high cultural level, as measured on the McCall Educational Background questionnaire, (.56). In the next group of strength fell such items as percentage of teaching staff with a high level of understanding of education, as determined from the poll 'What should our school do?' (.53), and percentage of eighth grade graduates and college graduates in the community (.54) and (.51), and percentage of unskilled labour (.54). In this group also was the average of the sampling of the public on the McCall measure (.51)

Quite clearly, few if any, of these could be readily controlled as a matter of state policy.

2.1.15. Pierce's study with the Metropolitan study
council data confirms these results. Of the twenty four
measures of community which he studied only two showed
a relationship with quality as measured by 'Growing
Edge' instrument, anywhere near the relationship between
expenditure level and quality.

2.1.14. Other items studied by various members
of the staff of the Institute of Administrative
Research for the same communities, in the same years
showed a comparably high relationship for the percenta-
ge of elementary staff with five or more years'
training beyond high school (.58), percentage of staff
that had had travel experience (.57,.59), and average
salary of staff (.51). There were comparably high
relationship found for the secondary school staff as
related to the measures of secondary school quality.

2.1.15. Powell (1988), in his longitudinal study,
studied the relation of school expenditure per pupil,
to total achievement in his own teacher school of
a country in the New York States. He administered

10. Pierce, Truman L.; What Do Good Schools Do for
Children? New York State Educational Conference Board,
Albany, 1956, p 2.

11. Powell, Farren. Educational Returns at Varying Expendi-
ture Levels; Contribution to Education No 573, New York;
Teachers' College Columbia University, 1938, p 64-97.
tests, both school achievement and of general mental ability by matching students of equal mental ability in low and high expenditure schools. He eliminated mental ability as a cause of differences in achievements, found out that pupils in top standard schools were on the 1.44 years ahead over those in poorly financed schools at the end of five years of schooling. Pupils in the high expenditure schools in all the nine school-phased school achievement measures were on an average superior to those in low expenditure schools. Powell estimated that pupils in lowest quartile of expenditure were getting a considerably smaller educational returns compared with those in the top.

2.1.16. Wellatt's (1949), study showed that within the specified group of high expenditure schools, there is direct relationship between the factors taken together and expenditure, and between each one individually and expenditure.

2.1.17: Since 1950 five additional studies have been made. Four of them confirm the findings of earlier ones, and a study of Connecticut found significantly less relationship between quality as measured

(achievement tests) and expenditure level as measured a two year average per pupil expenditure presumably without the use of sparsity corrections.

2.1.1 Memory many others have studied the problem of cost and quality relationship in their studies at various levels; however, these studies are somewhat broad and they do not enter to the indication of a point on the scale beyond which an expenditure level does not yield commensurate returns is significant.
PART TWO

WORK DONE PREVIOUSLY IN INDIA

3.2.1. It is emphasised that the cost and quality relationship has been studied at length by the various scholars or the educationists. However, the study would not be a complete one unless mentioned critically the studies done by some thinkers of the Indian Educational Systems; under the study of the Foundations of Education and the Indian Scholars in Education. I therefore, give a brief account of Indian Educationists who have attempted to establish the relationship, if any, in the problems of costs and quality of education or the educational financing.

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3.2.2. Atmanand Miara studied the financing of education. He has accounted a number of investigations of economies of education. He classified statistical investigations under four heads:

1) Rich nations appear to have more and better educated people than poor nations. The same

results are found if a single nation is studied at different periods in its history.

ii) It is not possible to explain satisfactorily the economic growth of any nation in terms of capital accumulation and labour force growth only.

iii) Comparisons of the life time earnings of people with different levels of attainment have revealed that the rate of return of educational expenditure has in the past varied between about 10 p.c. and 50 p.c. (when education is provided free by the State, the rate of return to the individual who stays on at school, can be of course much higher than this).

iv) Structural changes in economy as developed proceeds cause a relative increase in the need for qualified manpower.

2.2.3. Mian has also reviewed the conclusions drawn by Edward F. Denison, from an exploration of economic growth in U.S.A., and found out that to the point that, every rich or poor which wishes to secure containing economic growth must devote considerable attention to its educational systems: Mian has studied various cost procedures and has eliminated some measures of costing.
3.3.4. Harobajan Singh has also attempted a study of some aspects of higher secondary schools' costs in a sample of schools under one and the same management in New Delhi and estimated that higher secondary schools under the control of one and the same management and following the same curriculum do not differ in unit pupil costs. Also he estimated the existing levels of costing and correlation of various functions and quality of education as revealed by scholastic achievement in the school final examination does not exist.

3.2.5. As revealed in the Education Commission Report, the N.C.E.R.T., New Delhi (1989) attempted a study group of cost productivity and efficiency measures, through various papers. The project consisted some articles on educational costs and analysis of educational costing. However, as these are the papers on methodology or the measurement, they have not estimated any special investigations.


Kerala with the major objectives, (i) how adequately schools are equipped for instruction and how far the proper atmosphere and incentives are provided for securing achievement, (ii) how far the achievement depends upon factors other than instruction, (iii) the relative achievement in well equipped and ill-equipped schools and (iv) suggesting ways and means of improving standards. The major findings of his study are, (i) although the maximum influence is exerted by the invermentional factors, the effect of non-instructional factor is also considerable and (2) because of the presence of interaction between various factors, good instruction becomes more effective, when the school has facilities such as a good laboratory audio-visual aids, etc. Instruction becomes more effective when the school has such facilities like auxiliary clubs and other clubs etc. One of the most important of his findings is, when the majority of pupils come from invermention of poverty, results cannot be improved, inspite of good teaching and proper facilities in the school. However, this asumption needs confirmation with a wider study as the sample taken by him was very small.

the relationship of educational facilities to the scholastic achievement in secondary schools. The facilities considered are, the size of the class, pupil teacher ratio, percentage of trained teachers and the recurring expenditure per pupil. The problem was investigated separately for government and non-government schools; as well as for boys' schools and girls' schools. A comparative study of the two states vis. Gujarat and Karnia was attempted to see if any regional variation existed in this regard. The results show that although there is considerable variation with regard to most of the educational facilities provided in the State of Karnia and Gujarat; yet there is not much variation in Government and Non-Government schools and boys' schools and girls' schools. The correlation coefficient between these facilities, and the results of the scholastic achievements obtained are generally low and as such no definite conclusions could have been drawn from the study, properly, due to the limitation of 'poor' criterion variables, inadequate sample and many other intervening variables which could not be controlled.

8.8.9. I have so far tried to give the account of the work done previously in the related problems. However, all of these above studies do not enter
to the definite criterion for cost quality relation-
ship, as well definite criterion for per capita costs
in the costing structures of secondary schools, especi-
ally for rural schools.