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The Relationship of Cost to Quality Education

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THE RELATIONSHIP OF COST TO QUALITY EDUCATION

A Research Paper
Presented to
the Graduate Faculty
Central Washington College of Education

In Partial Fulfillment
of the Requirements for the Degree
Master of Education

by
Dale T. Mitchell

July 1961

THIS PAPER IS APPROVED AS MEETING
THE PLAN 2 REQUIREMENT FOR THE
COMPLETION OF A RESEARCH PAPER.

Ned Phillips
FOR THE GRADUATE FACULTY

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CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

The purpose of this study was to show a relationship of cost to quality in education. The material presented will be from many sources. Some of the research was somewhat outdated, but because of no recent studies on the subject, the material was used. It is the writer's hope that the reader will weigh all of the material and make his own comparisons with the present day situation.

I. THE PROBLEM

Statement of the problem. There have been many comparison studies of cost as it relates to quality in education. Some of the earliest date back as far as 1896.

Limitations of the study. The material presented in this study is only a small part of that available. It is, however, enough of a cross-section to allow the reader a sufficient insight into the problem.

The books used in this study were from the writer's own professional library and the Central Washington College of Education library. Some material was taken from various pamphlets from the National Education Association.

II. DEFINITIONS OF TERMS USED

Quality. As it is used in the body of this paper, "quality" is: "The degree of excellence which a thing possesses, hence; excellence; superiority" (16:1189).

Cost. "Cost" is defined as follows: "To be obtained or obtainable for (a certain price); to be priced at" (16:334).

CHAPTER II

REVIEW OF THE LITERATURE

There are many books and articles written on quality and cost as they pertain to education. The following review will give brief excerpts and points of reference from some of the authorities in the field. It is hoped that the reader will weigh carefully each author's point of view.

I. BACKGROUND OF COST AND QUALITY IN EDUCATION

Education is big business. Sometimes it is said to be the biggest in the United States. This is true, if one is thinking of education as an investment to develop our human resources, upon which all else depends. It is not true if one has in mind school costs as compared with some other expenditures (13:5).

This statement, taken from the National Education Association committee on finance, indicates the immense size and importance of education. It also points out the fact that even though it is a large business, it in a sense operates on a small business budget.

The process of education is no longer a small business venture. It requires skilled teachers, new machines, constantly changing curricula, and more new buildings, to name a few of the requisites for what we now aim for--quality education.

In order to attain quality education, we must spend more money proportionately for education than for other areas. The American Association of School Administrators'

pamphlet Financing Tomorrow's Schools has an interesting breakdown of American spending since 1948. It is as follows: \$151 billion for tobacco, alcoholic beverages, and cosmetics; \$127 billion for recreation; \$73 billion for highways; \$78 billion for public elementary and secondary schools. This is also followed by the question, "Can we afford good schools" (1:6)? By looking at the gross national product sale, one finds that in the year 1958-59 only 3 per cent of the gross national product was spent for education. This again substantiates the aforementioned figures on national spending (1:5). All of the time the price of education is going up. One might ask, Why is education costing more nowadays? According to the National Education Association there are about four main reasons for increased costs: (1) mounting enrollments, (2) inflation--rising prices, (3) additions for quality, and (4) additional cost for new school buildings (1:11). All four affect the cost of education. The third item is probably the most intangible or argumentive.

Many people do not understand what quality education is. It is rather hard to explain fully, because it varies from person to person and school district to school district. Dr. George Brain, Superintendent of Schools for Baltimore, Maryland, did a fine job of explaining this. Following is his answer to a question concerning quality education:

These key factors revolve around personnel and money. To achieve quality education, wise planning is needed.

One important factor would be administrative leadership. Another would be staff adequacy and its relationship to staff salaries. In other words, a district's ability to attract and hold top people. A third factor would be instructional expenditures, with a close, hard look at instructional aids and equipment.

These would include supporting services such as clerical personnel and the people who work in special service fields assisting the teacher, as well as mechanical aids and equipment. A final important element would be the allowance made for research and experimentation. A school district should seek ways to improve school quality through continuous experimentation (9:124-125).

Dr. Brain was asked several questions concerning quality education. One was, "What are some of the things school officials might examine to determine whether or not they have a quality program" (9:125)? His answer follows:

They would have to look first at the level of their expenditures and next at their pattern of distribution. How much have they spent on administration, teachers' salaries, educational supplies? They may find they have been overstaffing their central office to the detriment of the instructional staff at the building level. Adding an additional assistant at the building level may bring greater benefits in terms of instructional improvement. Another important area would be that of available instructional materials--libraries, reference materials, instructional resources of all kinds. Teachers cannot be effective without proper tools. Of course the teacher-pupil ratio must be considered too. Most schools presently in the Quality Quarter have a good pupil-teacher ratio. Salary level is always an important part of such an evaluation. Good salaries help attract the people that are needed to do the instructional job. But salary, in itself, is only one item in evaluating school quality (9:125).

The foregoing helps to clarify and give an insight into the problem stated at the beginning of the paper. The writer would like to give the results of several different studies compiled on the cost-quality relationship in education.

The material covered is not all recent but is within a sufficiently reasonable length of time as to help in presenting the stated problem. Again, as was stated in the opening paragraph, the theme is more money for education means better education.

II. RESULTS OF SOME COST-QUALITY STUDIES

Leonard P. Ayres, in a study compiled in 1926, found that "in general the high educational figures are accompanied by high financial ones, and the low educational totals are correspondingly low financial ones" (2:54). He concluded that the

". . . figures for school expenditures do have a close relation to those which show the amount of education given and tell how many are in high school, and that they are important indicators of the efficiency of the system and the quality of education the children receive" (2:54).

In 1926, John K. Norton did a study on the ability of the 48 states to support education. He found that in the financially able states more money was spent per pupil, teachers were paid higher salaries, more money was spent on non-salary items, and the school plant was superior. There was also a longer school term, more high school education, and better prepared teachers. On the other hand there was a higher illiteracy rate in these states than in the poor states (14:88).

Lester R. Grimm conducted a study in 1938 measuring educational opportunities in relation to their cost. He

used 24 schools. Eight were low, 8 were middle, and 8 were high expenditure schools. He compared the level of expenditure with scores on tests of pupil achievement and type of educational opportunities provided. On the tests of achievement, the high expenditure schools generally exceeded the other two classes.

Language improved with the cost level. Reading and arithmetic scores were lowest in low cost schools. These were improved in middle cost schools and were even higher in high cost schools. The high cost school offered more in physical education, other activities, smaller class loads, better trained teachers, specialists, and better buildings (7:46). Teaching personnel and school facilities, however, are only means for achieving quality in education. They do not measure quality (12:21).

In order to come to some conclusions on measurement of quality in education, Mort, Vincent, and Newell prepared a guide whereby trained observers may judge the extent to which the educational program of a school system is based upon the findings of modern psychological research and upon analyses of the educational needs of our society. The checklist allows the observer to rate the school program on the extent that it (1) provides for teachers the basic skills according to tested procedures, (2) provides for teaching of fundamental areas of knowledge with emphasis on their scope of meaning, (3) seeks to find special talents of individual students

through tests and tryouts, and (4) aims to develop fundamental behavior patterns such as good citizenship, ethical character, and the ability to think. Trained observers used this in both elementary and secondary schools. Operating on the premise that all four major areas are present, 64 specific items were used in elementary school and 85 in secondary schools (11:33).

In 1954, James Griffis made a study of school facilities and procedures at three cost levels in 44 schools in Southeast Texas. The schools were rated by direct observation on 100 modern practices. The results showed that the educational program and services increased with increased expenditures. His conclusion:

Higher cost level schools . . . attract and retain more skillful and better prepared teachers . . . give increased attention to the needs of each individual student . . . make use of a greater abundance of supplies and teaching aids, and also of better quality. They usually have more functionally designed and better equipped school buildings and facilities than other schools (6:23).

Another phase of cost-quality relationship was explored by Henry M. Brickell in a study conducted in 1953. This was in connection with money spent for things other than teachers' salaries and plant maintenance. He conducted this using 31 communities as his source of information. He found that "small expenditures," so-called because of their small amounts, had in aggregate a big relationship to quality. His findings suggest that good schools don't spend money on everything. While there is a high correlation between some items of

current expense and quality of education provided, the correlation with other expenses is low (5:41).

Bruce K. Bothwell followed with a similar study in 1958. It, too, deals with gains in quality education derived from increasing small-expense items in the school budgets. It also shows that over-emphasis of spending in some areas is bad. He used small item expenditures in 71 school systems of all sections of the United States and discovered that

. . . as districts raised current expenditure outlay per pupil, they didn't continue to pour more and more money into textbooks, paper, stencils, roll books, chalk and other basic materials. Instead they began spending more for such items as Audio-Visual materials, Physical Education and Health supplies, Professional Staff Travel, Public Relations Activities, Science supplies, and similar materials (3:8).

These two studies help emphasize the importance of discrimination in budgetary items. It seems apparent that certain small expenditures count largely in advancing school quality. This is more than one might expect.

One also must be concerned with the returns of quality education. It is the opinion of several authors that the more money spent for education, the more generous the returns. Norton and Lawler, in an inventory of several different educational expenditure levels, proved this:

The states which finance their schools generously get superior results in such matters as percentage of school age children actually in school, percentage of literacy achieved by the population as a whole, and in educational qualifications of men in the Selective Service tests. The opposite is true for states which finance their schools on a meager basis (15:409).

Hutchins and Munse did a similar study in 1953. They reported a large difference in level of financial support of schools, "Two percent of the classrooms expended more than \$8,121 and among the lowest levels 2 percent of the classrooms expended less than \$1,469." The range was reflected in the amount of rejections for military service (8:136).

In commenting upon the higher rejection rates as related to school expenditure levels, the study had this to say:

The situation with regard to expenditure levels, educational load, financial ability, and effort to support education has a definite bearing upon national security. This suggests a probable relationship existing between expenditures per classroom unit and the percents of Selective Service registrants rejected because of failing the Armed Services Qualifications Tests. Low expenditures for education are accompanied by high rejection ratios, and rejectees in one area mean that others must be inducted where the registrants secure higher ratings on the qualifications tests (8:111).

Vernon Bowyer made one of the most informative surveys. It had to do with economic returns to the states and communities as related to money spent for schools. He determined the effort to finance education in each state as indicated by the per cent school expenditures was of income in past years. He used total income paid to individuals in a state during subsequent years as a measure of economic progress (4:178). He broke these findings into two parts: (a) relation of school support to subsequent changes in per-capita wealth, 1890 to 1922, and (b) relation of school support to subsequent change in income, 1926 to 1946. He concluded:

1. When the percent of wealth or income expended for public schools is taken as an index of the educational

status of the various states, a positive relationship is found between this index and subsequent economic progress for the period 1890 to 1946. The relationship is so generally consistent as to indicate that the work of the schools has had a causal bearing upon economic development.

2. School support, in terms previously indicated and considered for the period mentioned above, apparently has begun definitely to affect economic progress within ten or twelve years after the date of the school expenditures and has continued this positive influence for several years thereafter. At the end of about twenty years, the influence of school support upon economic progress begins to wane, or at least evidence of it becomes submerged by the influence of a more recent period of school support.

3. The amount of economic return apparently resulting from such school support has become sufficient within ten or twelve years to cover not only the original school expenditures but also a liberal rate of interest for the intervening years (4:178).

Many other phases could be covered in this area of cost-quality relationship, but the writer chooses not to elaborate on all of these. He feels that the reader can get a good understanding of the relationship from the material presented.

CHAPTER III

SUMMARY AND CONCLUSIONS

The findings of studies on the problem presented have been summarized several times in the paper. The writer feels, however, that the final summarization of the complete topic is best explained by Paul Mort:

Every empirical study of the relationship between expenditure level and quality of education adds its bit to the presumption that the relationship is strong. Studies of the relationship in acceptably organized districts suggest that schools that spend more contribute more to the lifelong personal happiness of their charges and to the social and economic strength of Americans as a people. The word "presumption" is used advisedly. The studies individually and collectively do not give us anything approximating a mathematical proof that this is so. In projecting into the future we are faced with the same complex difficulties that confront us in most human problems--difficulties that arise from the fact that no matter what we know about today, tomorrow will be a different kind of day (10:9-10).

The summary gives the reader the general idea of the paper. It also shows that even with all of the studies presented, the reader must make his own interpretations of the material presented.

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