

Cost Analysis and Curriculum Decisions

WILLIAM R. MANNING *

COST analysis is a relatively new phenomenon in the field of education. By tradition, curriculum and instructional personnel have been divorced somewhat from economic measures. However, I believe that cost-effectiveness analysis will play an ever increasing role in school systems and in educational organizations. We must concern ourselves with this subject in order to meet increasing demands. Financial resources for education must be raised and available funds utilized as efficiently and effectively as possible. We must be able to prove the effectiveness of the dollar spent.

More than ever before, massive demands are being made upon the schools. Resources to meet these demands are extremely inadequate even by the standards for today, while we are actually trying to educate students who will be coming into the job market and adulthood in 1975, 1980, and even 1985. In addition, the lingering problems of the large urban areas seem to be overwhelming and unyielding, and almost every program which is suggested for their solution appears to founder on the great rocks of inadequate funds. In the leadership role which has been placed upon educational institutions in mitigating the social ills that beset our nation, many new curriculum decisions have to be made. These decisions have great cost implications, but there are only limited resources to support them.

As our educational investment creeps higher, people and their representatives in Congress and in state legislatures demand more insistently to know what education costs and what education produces: What are the outputs for the dollar spent? They want to know how we can furnish the best education for the dollars provided. Recent increases in federal funds have failed to live up to the level of performance expectation.

"Planning, Programming, Budgeting" (known as PPB) is being utilized for the purpose of bringing maximum effectiveness to educational spending. Through the use of PPB the educator can turn the concern for cost into added resources which will more adequately meet the needs of our students.

An important element of PPB is cost-effectiveness analysis. The questions we must ask are: What is cost analysis? What information can

* William R. Manning, Superintendent of Schools, District of Columbia, Washington, D.C.

it provide? What is the role of the curriculum staff in using this information in the new decision-making structure?

Choosing Alternatives

The first question to be considered is: What is meant by cost analysis? This term is really too general to be used. More specifically, we have to consider three basic concepts: cost accounting, cost effectiveness, and cost benefits. By simple definition, cost accounting is taking all of the costs which are related to a certain objective and grouping them together in order to determine the cost of the objective. Costs can be organized on many bases. In program budgeting, an attempt is made to group or center all costs around the program, as with the teaching of reading or the cost of all guidance programs. This tells the board of education and top level administrators as well as the public how the funds are really allocated.

Cost analysis, however, goes beyond just grouping costs. Are the funds being used efficiently? This implies the concept called "cost effectiveness." Would the same results be achieved with a different program or approach that would cost less? Would Approach A with all its supporting instructional time, materials, and space and equipment requirements result, on an average, in greater reading ability for a group of students than an equivalent amount of funds applied in Approach B? Would the same gain in pupil performance be achieved for less money? Education certainly is measured in terms of change in the behavior of students. If the desired change can occur with a smaller input of resources, then the educational program has achieved a certain degree of efficiency.

Finally, a word about cost benefits. Does the change which was effected really benefit society? For example, if the dropout rates were reduced, projections would indicate that such reduction would result in greater earning power for the individual and an increase in gross national product. In addition, it suggests a reduction in the number of people who would be on welfare and less welfare costs to the nation. Programs A and B might both be justified in terms of benefits derived, but by cost-effectiveness analysis, it can be indicated that perhaps A is twice as efficient as B: and neither A nor B can be evaluated if there is not cost accounting which can accurately price them. Such evaluation can provide the defense for the dollar spent and open the door for further dollars.

In short, cost-effectiveness analysis is simply an analytical attempt to relate the cost of a particular program or project to the effective performance or goal attainment. It enables the curriculum developers and other decision makers to choose from alternatives on the basis of least cost and greatest effectiveness.

The capacity of the educational enterprise actually to make the many measurements of its products can, of course, be properly challenged. This capacity is essential to evaluate the impact of programs on pupils. It is true that these measurements are difficult to make, but they can be made to some extent. They will be made in a more refined manner in the years to come because tools are now available, and the concepts are being developed which are necessary to perform much improved program evaluation. The computer, for instance, is here. Tremendous masses of data can be handled by translating them into machine readable form. Although the

computer is no decision maker, it can illuminate and provide the decision maker with more information and consequently more alternatives.

Evaluation can provide the rationale for allocation of the available resources or for seeking additional resources in order to expand programs. This is a justification which has been used by the Washington, D.C., Public Schools in testifying before Congress for additional funds. Use of analysis of this type is actually generating needed resources to a far greater extent than would have been possible without this kind of analysis. The D.C. Public Schools are, like many other school systems, just beginning in this area. We are, however, observing some positive results, and we hope to see increasing benefits in the years ahead.

Finding techniques of evaluation which will accurately reflect the success or failure of a given program presents a major difficulty. How does one measure a child's relief when an effective guidance counselor has helped to ease him through a personal crisis? How does one evaluate the increased enthusiasm of students when a new program is working where previously there was boredom and drabness? This kind of success can be measured to some degree. The excitement and interest will be converted by the student into greater learning if the program is really helpful. The program is the approach which has caused this to occur, and such a program costs something to produce, whether the funds were spent to assist staff development, to increase salaries, to lower class sizes, or to introduce new technology.

Perhaps even more difficult than the development of an accurate method of evaluation is the establishment of quantitative goals. We must know exactly what it is we are attempting before we can evaluate the results. A program structure must be developed which will state goals in terms of specific performance objectives. Only then can criteria be established for measuring educational performance which can be applied to resource allocation.

Administrators in education have had to realize that educational resource allocations must be based on sound analysis of goals and programs. Cost-effectiveness analysis can assist us in measuring and improving our instructional program and in the effective expenditure of our limited funds. This analysis will require a close working relationship between those who design educational programs and those who are involved in the budgetary process. Without cooperation, it will not be possible to allocate resources on the basis of careful analysis of objectives and results.

Cost-effectiveness analysis is an enigma to most educators but, through knowledge and understanding, it can be utilized to enhance greatly the results of their efforts and to shoulder the demands which have been placed on educational administration. It is important for those who design the curriculum to use cost analysis as a tool to aid them in planning the most effective educational programs possible for the public schools. Hence, through cost-effectiveness analysis, which is a key element upon which the "Planning, Programming, Budgeting" system is erected, a more rational basis for the efficient allocation of scarce resources among competing programs can be made. Those curriculum makers who understand the process and who can develop programs utilizing cost-effectiveness analysis will receive the scarce resources available and, I am convinced, greater educational benefits will result. □

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