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ABSTRACT

A plan for educational assessment is presented which focuses upon three interdependent aspects of a management control system: input, process, and output. Input encompasses the provision, allocation, and assignment of resources, both human and material; process concerns the application and utilization of these resources in ways that will produce changes in students or staff; and output is the behavior resulting from the process. A three-phase model is presented that is to extend over a period of from five to seven years. During Phase One--Product Assessment--a study of output from educational programs will be initiated and instruments developed for monitoring the discrepancies between "what is" and "what should be." In Phase Two--Cost Analysis (input assessment), a method for developing cost data for the state education system will be specified. Phase Three--Process Assessment--will be concerned with determining ways of modifying the functional relationship between input (resources) and output (student performance) to reduce discrepancies identified. The proposed plan is expected to lead to the establishment of accountability for educational outcomes. (DB)

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PRELIMINARY REPORT:
FLORIDA'S PLAN FOR EDUCATIONAL ASSESSMENT

Introduction

It has been adequately stated in the recent past that evaluation systems exist for the purpose of developing information to be used by management in the decision-making process. The plan for educational assessment presented in this preliminary report proposes to serve this purpose through establishing three distinct but interdependent aspects of a management control system. If an assessment program is to provide information which leads management to make positive change, it must focus upon these aspects: input, process, and output.

Input encompasses the provision, allocation and assignment of resources, both human and material. Process concerns the application and utilization of these resources in ways which will produce changes in students (or staff). Output is the behavior resulting from the process (behavior is used here in a general sense to include any observable student attributes which are of concern to the schools).

Educational management is equally concerned with assessment of each of these aspects of the system. Input has traditionally received greatest emphasis and attention at the state level. Assuring that funds are appropriately expended, that instructional personnel are properly trained and assigned, and that facilities are adequate to their purposes has been, and properly should be, a concern of state level management.

Outputs have received less emphasis at the state level, but it should not be thought that output measures have not been gathered. Statewide testing programs are output measures. Tests and other instruments administered at district and school levels are output measures. So too are dropout rates, employment rates, and other measures of societal expectation with which the schools are concerned.

Process has received the least attention at the state level. It is true that some revisions of process have received state attention, e.g. differentiated staffing, individualized instruction, and year-round school. However, these process modifications may be of little import when implemented without considering desired or desirable changes in student behavior. Modifications must be evaluated in terms of their effects upon inputs and outputs.

Related Activities

The plan presented in the following pages builds upon several ongoing activities of the Department of Education. Further, the assessment program

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can receive direct support from these activities.

Development of product objectives has been a major part of state accreditation procedures for some time. The Research and Development program is providing assistance in development of cost analysis techniques and in the development of criterion-referenced achievement measures. The Joint Federal/State Task Force (Belmont Group) has made great strides in consolidating Federal reporting requirements. The Needs Assessment Project has compiled a great deal of data relating to the current status of education in Florida, and has available the analytical tools required in a comprehensive assessment program. Funds which may be used within the Department for staff development in planning and evaluation are available through Title IV of the Elementary and Secondary Education Act. These and other activities represent a preliminary planning, research, evaluation and development effort already under way in the Department, and will make a substantial contribution to the assessment program established under Chapter 70-399, Laws of Florida.

The plan assumes the involvement of many agencies. Various units of the Division of Vocational Education and the Division of Elementary and Secondary Education, including the Florida Public School Council, will provide valuable input to the program. School district personnel will be invited to participate in formulation and validation of educational objectives, as will lay citizens, school board members, professional education organizations, private industry, university personnel, and other departments of state government.

The Assessment Plan

The plan proposed below is based on the premises that (a) the Department of Education is committed to a policy of positive change in the state system of education and (b) that this commitment extends to a redefinition of the state's role in the maintenance and control of the state system of education.

The model presented is viewed as a three-phase model extending over a period of from five to seven years. It is felt that seven years is not an unreasonable time requirement for installation of a tested comprehensive assessment procedure. One of the features of the model is its flexibility and amenability to modification as circumstances change. Phase one, product assessment, will begin in 1971-1972; Phase two, cost analysis will also begin in 1971-1972. Phase three, process assessment, will necessarily begin at a later stage--probably 1972-1973.

The logic for this sequencing is simple. If there is indeed dissatisfaction with system outputs, the extent of the dissatisfaction must be specified before corrective action can be taken. Further, the costs currently allowed to the elements of the system must be known before money resources can be re-allocated. This reallocation also is dependent upon where the greatest dissatisfaction with output exists.

Phase One--Product Assessment

During this phase, a study of output from educational programs will be initiated, and instruments will be developed to monitor continuously the discrepancies between "what is" and "what should be". Several steps should be started at once:

1. The State Board of Education and other educational policy-makers will state and adopt goals for education. These goals will necessarily be broad, but must encompass the areas deemed by the policy-makers to be the concern of the state education system. It is to be emphasized that the goals are broad, relatively timeless, and perhaps visionary. They represent areas in which the policy-makers wish the school system to function; and to that extent they delimit the roles which the education system may play. In any management-control-system it is essential that top management specify the scope of operation, or else control is impossible.

2. Selected staff members of the Department of Education, from the Division of Elementary and Secondary Education and the Division of Vocational, Technical and Adult Education, will be assigned by their respective Division Directors to gather and consolidate measurable educational objectives from sources within and without the state. These objectives will specify desired outcomes for students and/or staff, the achievement of which can be determined. They will specify who is to change, the extent of change sought, and the conditions under which the change will be sought.

During 1971-1972, the Division of Elementary and Secondary Education will focus upon general educational outcomes desired for children up to about the sixth grade level (approximately 5-12 years of age), while the Division of Vocational, Technical and Adult Education will focus upon vocational objectives for the elementary and junior high school and on at least three (3) specific occupational program areas at the high school level.

3. Lay/professional boards will be empaneled to determine the relevancy of the collected objectives to state goals. Objectives determined to be not relevant to these goals will be modified or discarded. It should be stressed that curriculum per se is not an issue in this determination; the objectives will be curriculum-independent. (The importance of specifying relevant desired outcomes overshadows established curriculum organization.)

4. Contracts will be let with competent professionals to develop and field-test items which measure the achievement of the desired outcomes determined in the preceding step.

5. Instruments constructed from the items developed in Step 4 will be administered to representative samples of students over the state. Since the list of objectives is expected to be quite lengthy, item-sampling techniques will be applied.

6. Data obtained from the procedures of Step 5 will be used to assess status--the extent of performance deficiencies can be directly specified. These data will be of little use for specific recommendations on how process (curriculums, programs; etc.) can be modified. It can reveal which curriculum areas are in need of revision or modification, however. Further, these data can be integrated with data currently available from the Department's Needs Assessment project to determine modifications in relation to the educational environment (context) of a given district.

Implicit in the foregoing is the principle that each of the objectives will be logically derivable from the goals established in Step 1. That is, if an objective is irrelevant to an established goal, it is outside of the education system's area of concern.

Phase Two--Cost Analysis (Input assessment)

During the cost analysis phase, a method for developing cost data for the state education system will be specified. The following steps are seen to constitute this phase:

1. Ascertain what cost breakdowns are desired, e.g., school costs, school costs by broad curriculum area, district cost by objective, or some combination of these or other breakdowns.
2. Determine means for collecting these cost data, specifically considering the "changeover" period (if there is one) during which the old cost data reporting system will still be used. Steps 1 and 2 should use all available resources, including one or more task forces with legislative and professional representation. Compatibility with Federal reporting requirements will be emphasized.
3. Appropriate cost data collection instruments will be developed and designed to meet the requirements established in Steps 1 and 2. Installation of these instruments must be accompanied by extensive staff development activities for both district and department fiscal personnel.
4. Uses to which cost data will be put should be clearly specified if collection of the data is to be justified. The relationship of these data (which represent input assessment) with product assessment and process assessment must be stressed. In order to derive measures of efficiency, or of cost/benefit, crosswalks between these three assessment phases must be established at the start.

Phase Three--Process Assessment

While some steps in process assessment must be started quite early during the project, most cannot be started until sound input and product data are available to work with. The process itself defines the functional relationship between input (resources) and output (student performance). Process assessment is concerned with determining ways of modifying this functional

relationship to reduce discrepancies identified through product assessment, within resource allocation constraints identified through input assessment. Steps in process assessment include the following:

1. Identify those broad process areas which appear to relate to product discrepancies of interest (generally, the larger discrepancies).
2. Using available research, delimit these broad areas to processes most reasonably indicative of producing positive change in outputs.
3. Develop "process objectives" which are relevant to the product objectives to which the larger discrepancies relate. This task is reasonably assigned to curriculum consultants and learning specialists. The "process objectives" will relate particularly to specific staff behavior, as opposed to the student behaviors. Contracts may be let with professionals to develop these objectives.
4. Develop instruments to measure the extent to which process objectives are achieved. Item/teacher sampling procedures may be utilized, where appropriate.
5. Specify and develop an "interface" with product and input assessment. That is, when new processes are installed, the specific effects of these processes on student outputs and upon input allocation must be available for management decisions related to efficacy, efficiency, and cost-effectiveness.

The development of process assessment procedures is necessary to obtain data for interaction with the other assessment phases. Only when these three aspects of the education enterprise can be measured and interrelated can sound professional judgments be reached. Each depends upon the other, and a lack of any one phase obviates sound decisions relating to the other two.

Establishing Accountability

The systems approach lends itself well to the establishment of accountability. By stating precise outputs, specific tasks can be assigned to personnel, who can in turn be held accountable for the proper completion of those tasks. Within an operational framework, accountability for accomplishing the mission of each unit can thus be assigned to appropriate individuals.

It is expected that the plan proposed here will lead to the establishment of accountability for educational outcomes. Actual achievement of outcomes must be determined by a comparison of product measures with pre-established standards (performance criteria). This task is most reasonably accomplished through "educational audit" procedures. However, the question arises as to the appropriateness of an educational audit conducted by those persons or agencies which established the performance standards initially.

Several organizations exist which have the expertise and experience to conduct independent educational audits. While the plan itself does not call for a periodic audit procedure, audit is an indispensable management tool which will be utilized in providing the comparative information required by the plan.

Summary

Improvement in education is not guaranteed by more money; neither is it guaranteed by the existence of product measures alone. Improvement implies positive change. Thus a knowledge of inputs, processes, and outputs together with statements of functional relationships between the three must be available to know (1) what change is needed; (2) how to bring about the change; and (3) the resources required for that change.

The assessment plan proposed above focused on three phases of management control: input, process, and output. An attempt was made to show the interrelationships inherent in this three-phase concept. Procedures for obtaining pertinent and relevant data during each phase were outlined.

The brief report presented above is not a complete nor a specific procedure for state educational assessment. The concept of this plan embodies a system approach utilizing three gross subsystems, each of which must be considered in a planned program for the improvement of education.