DOCUMENT RESUME

ED 219 856 EA 014 907

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TITLE The Planning, Evaluation and Resource Management Model: PERM. Volume 1 in the PERM Handbook Series.
INSTITUTION Connecticut State Dept. of Education, Hartford. Bureau of Research, Planning, and Evaluation.
PUB DATE Oct 80
NOTE 31p.; For a related document, see EA 014 908.
AVAILABLE FROM Coordinator, Program Evaluation Unit, Bureau of Research, Planning, and Evaluation, State Department of Education, Box 2219, Hartford, CT 06115 (single copies free).

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Educational Assessment; Educational Needs; *Educational Objectives; *Educational Planning; Educational Resources; Elementary Secondary Education; Glossaries; Graphs; Models; *Needs Assessment; *Resource Allocation; School Districts
IDENTIFIERS *Planning Evaluation and Resource Management Model

ABSTRACT

To help school boards, educators, and citizens in Connecticut do more comprehensive district planning, this handbook introduces the planning, evaluation, and resource management (PERM) model and describes how it works. Section 1 of the document gives an overview of the planning process, defines comprehensive planning, and answers general questions about the PERM model and its phases, about who should have responsibility for planning, and about the necessity of continuous planning. The PERM model itself, presented in section 2, may extend over two cycles, covering 11 years, and includes four phases: (1) definition of district goals and student objectives; with community participation; (2) assessment of district needs, assignment of priorities to goals, analysis of existing instructional programs, generation of solutions to problems, and planning of program implementation; (3) evaluation of the programs to judge whether their goals are being met; and (4) reallocation of district resources based on the evaluations. A glossary of 94 planning terms is provided in the document's final section. (Author/RW)

THE PLANNING, EVALUATION AND RESOURCE MANAGEMENT MODEL:

PERM

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THE PLANNING, EVALUATION AND RESOURCE MANAGEMENT MODEL: PERM

Volume 1 in the
PERM Handbook Series

October 1980
Connecticut State Department of Education
Division of Educational Administration

FOREWORD

This is the first handbook of the Planning, Evaluation and Resource Management (PERM) series. The Bureau of Research, Planning and Evaluation has created the series in response to the desire of the legislature and local school districts to approach planning, evaluation and resource management in a more comprehensive and systematic manner.

In an era of increasing demands for accountability and dwindling resources, it is essential for educators to provide effective programs. Through planning and evaluation, local districts can identify their strengths and weaknesses, determine what programs are needed and channel funds accordingly.

While use of the PERM model is optional, it does provide a series of well-defined steps for districts to use in this planning and evaluation effort. In addition, the state will systematically channel resources to local districts which choose to strengthen their planning, evaluation and management functions.

This handbook, *The Planning, Evaluation and Resource Management Model. PERM*, describes the PERM model in detail. Volume 2, *Developing and Establishing Local School District Goals*, provides models and practical suggestions for involving the community in the goal-setting process. Volume 3, *Developing and Establishing Local School District Student Objectives*, describes methods of involving all levels of school district personnel in setting objectives related to the goals adopted by the district. Books and resource centers that can provide added materials on these subjects are listed in Volume 4, *Annotated Bibliography for Educational Planning Resources.*

Mark R. Shedd
Commissioner of Education

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PREFACE

As financial resources dwindle, Connecticut educators, along with others throughout the country, are forced to examine their educational programs and practices carefully. If local educational resources are to be used wisely, comprehensive planning is essential. It is the less affluent districts, without adequate planning and evaluation capabilities, who find it most difficult to use their scarce resources effectively.

The State Department of Education recognizes its responsibility to provide leadership and support, through its programs and services, to ensure that all districts have an equal opportunity to provide quality educational programs. It is hoped that the Planning, Evaluation and Resource Management (PERM) series will provide the framework Connecticut educators need to plan, implement and evaluate educational programs more efficiently.

The first section of this handbook presents an overview of the planning process and answers some general questions about it. In the second section, the PERM model, created by the Bureau of Research, Planning and Evaluation, is described in detail. The last section contains a glossary of common educational planning terms.

The four phases of the PERM model are: phase I - defining goals, phase II - identifying needs, phase III - evaluating programs, and phase IV - allocating resources.

Various constituent groups will find that one or more of these phases will be helpful to them in their respective roles. The following is a list of these groups and the phases they may find useful.

Board Members:	
• Determine educational priorities	Phase I
• Evaluate educational programs	Phase II & III
• Assist with the budget process	Phase IV
Superintendent of Schools:	
• Establish program priorities	Phase I & II
• Analyze instructional programs	Phase II
• Plan for change	Phase II
• Develop budget request	Phase IV
• Allocate resources to programs	Phase IV
Administrators:	
• Plan for effective programs	Phase II
• Assess staffing needs	Phase II & III
• Evaluate instructional programs	Phase III

Teachers:

• Plan for effective programs	Phase II
• Adjust teaching strategies	Phase II
• Evaluate instructional programs	Phase III
• Evaluate student progress	Phase III

Parents:

• Determine educational priorities	Phase I
• Assess progress of children	Phase III
• Evaluate whether education budget provides for needs	Phase IV

Non-parents:

• Understand education needs/budget	Phase I & IV
• Determine community priorities	Phase II
• Assess impact of federal and state mandates	Phase III

We wish to recognize our bureau's Program Evaluation Unit, headed by Dr. Robert J. Lucco, for conceptualizing the PERM model and developing the handbook series. Dr. Lucco also authored this first volume of the series, *The Planning, Evaluation and Resource Management Model.*

We also wish to acknowledge the cooperation of our three pilot school districts — Berlin, Willington and Stamford — and especially the diligent work of Lawrence Giandomenico, superintendent of schools in Berlin; Richard Vaillancourt, superintendent of schools in Willington, Norman Walsh, assistant superintendent of research in Stamford; and David Calchera, director of EASTCONN and their staffs. Their contributions were essential for the production of the four volume PERM planning series.

Stamford and Willington have set district goals, and Berlin has begun the goal-setting process. The recommendations of these districts, based on their own experiences — the problems and pitfalls they encountered and the products of their efforts — helped shape the content of the PERM planning series.

We would like to acknowledge Dr. Bernard A. Kaplan of Marcellus, N.Y., for assistance in developing this handbook. Dr. Kaplan's experience and background in the area of planning and goal setting contributed immeasurably to the content of this handbook.

In addition, we would like to acknowledge the New Jersey Department of Education whose *Comprehensive Planning in Education* series provided guidance, direction and substance for our own PERM handbooks.

Single copies of this handbook may be obtained by writing: Dr. Robert J. Lucco, coordinator, Program Evaluation Unit, Bureau of Research, Planning and Evaluation; State Department of Education; Box 2219; Hartford, CT 06115.

Pascal D. Forgione, Jr., Chief
Bureau of Research, Planning and Evaluation

THE PLANNING PROCESS

THE PLANNING PROCESS

Inflation, public pressure and recent legislative actions have forced local education agencies (LEAs) to closely scrutinize their use of shrinking education dollars. In order to plan effectively and efficiently, educators must be able to determine which programs really work. But most school districts cannot afford a research and evaluation staff. Without these services they are sometimes forced to contract with outside consultants at considerable expense.

The Planning, Evaluation and Resource Management (PERM) model provides for systematic examination of school operations so that local districts can use scarce resources efficiently.

The PERM model addresses the following planning questions: Where are we? Where do we want to go? What are some realistic ways of getting there? Which is the best route? and What are the risks and likely side effects?

Once the appropriate course has been selected, the model addresses a number of evaluation questions: How far have we come? Are we still on our course? Do we still want to go to the same place? and What program changes are required?

Finally, with the model, districts can assess the cost of these programmatic changes in relation to other competing demands for district resources.

What is Comprehensive Planning?

The term planning means many things to many people. For instance, administrators not only plan activities to achieve objectives within their budget constraints; they also plan the activities and time allocations of their staff and plan day-to-day activities such as meetings, appointments and routine functions. Teachers and supervisors plan classroom activities for the year and the semester, often adding details as the week or the day approaches. The school board and the superintendent must plan for facility, program and budgeting considerations a year or more in advance.

As these examples suggest, a large amount of planning already takes place in our educational systems. How then do we improve planning at the district level? Why should a district develop a strong planning capability? How is this capability developed and integrated with evaluation and management functions? Every district should ask these questions and give some thought to the answers.

In this handbook, comprehensive planning is defined as the process of developing, weighing, selecting and evaluating alternative means for achieving educational goals and

objectives. This definition focuses on educational programs as a means of realizing instructional goals and objectives. That planning is a *process* cannot be stressed too strongly. It is an ongoing activity which includes evaluation and supports policy-making. It is a means of looking at a problem or a situation and determining "where do we go from here?"

What is the Value of the PERM Model?

The PERM model is graphically represented in Fig. 1. Virtually all districts engage in some of the activities represented on this model; few engage in all of them; and fewer still employ a systematic approach so that the results of one phase will have an impact upon subsequent phases. To be meaningful, planning must be approached with an overall view of the various aspects of the program. For example, the most accurate and comprehensive statement of goals and objectives will be meaningless without an equally accurate analysis of current programs and a thoughtful assessment of alternative means for reaching those goals. By the same token, the most thorough, imaginative program may be wasted if it does not meet the actual needs of the district.

As illustrated in Fig. 1, the PERM model is cyclical in nature. Planning occurs during phases I and II of the model: first, at the district level where educational goals are developed and, second, at the program level where program needs are assessed and program changes made. Program changes are put into action between phases II and III. Finally, evaluation occurs during phases III and IV. The program's objectives are reviewed, its progress is evaluated and its future is determined. After completing these steps, the process begins again at phase I with planning and goals assessment.

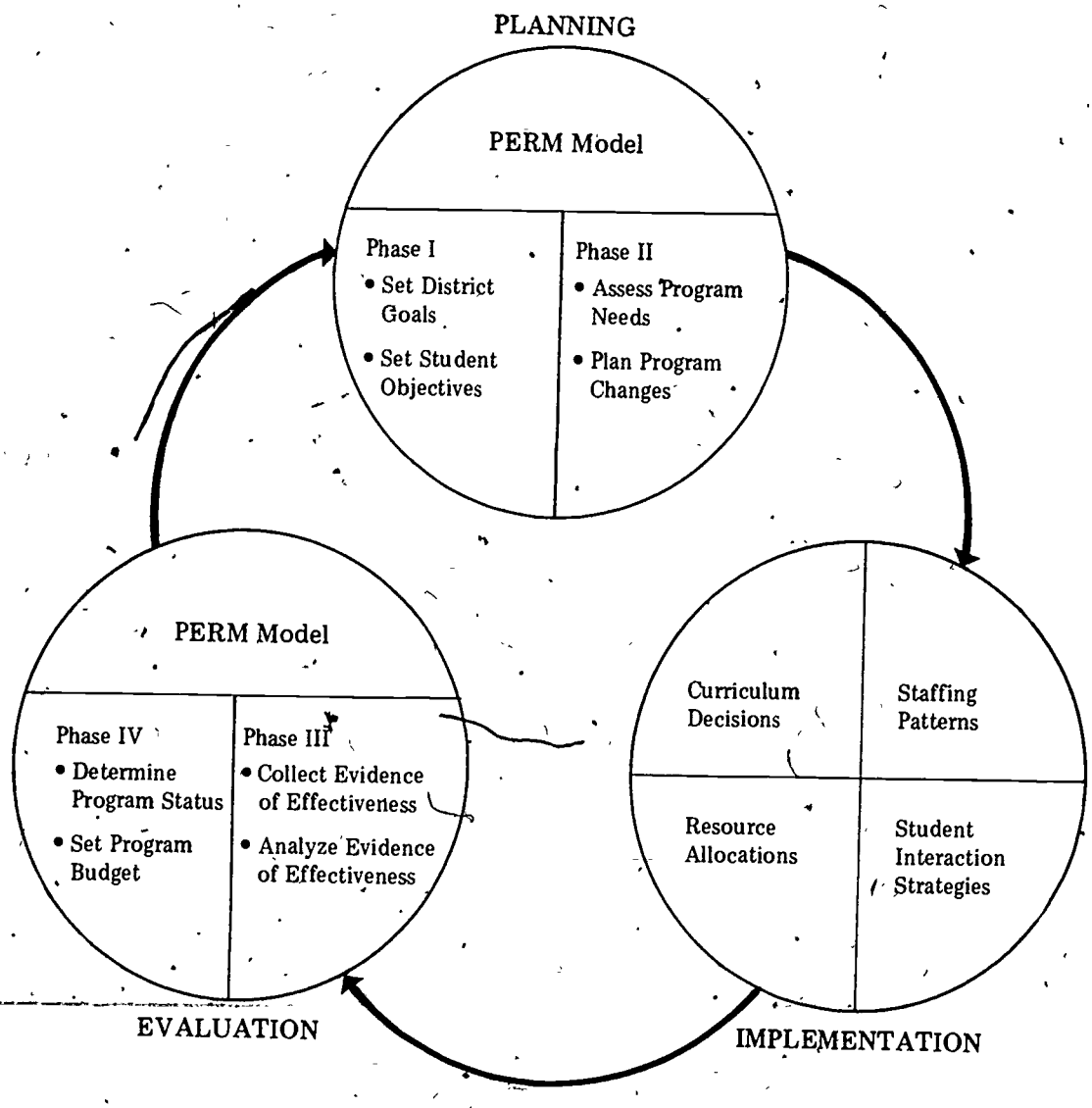
In the past, a few key individuals within a district could single-handedly make rational plans. Today, however, there is an overabundance of relevant data, the level of educational technology is constantly changing, and new, effective programs are being developed almost daily. Schools are being asked to solve broad, complex social problems and to serve an increasingly diverse clientele — student, parent and community. For these reasons educators must employ a more rational, systematic means of decision-making.

Planning is no panacea, but it does provide a framework for viewing change and coping with it. It provides a measure of control over the type of day-to-day changes that will occur and a method of responding to them. Planning also provides the means to determine present and future needs and the tools and time for developing programs to meet those needs.

In order to make timely decisions, it is necessary to know a district's strengths and weaknesses and how others perceive them. The school serves various interests and publics such as parents, students, teachers and other citizens. It is necessary to know how the various publics view their system in order to serve them. In some cases the data and citizen perceptions will agree, but in others new weaknesses may be revealed. In still other cases, the district may discover that performance levels in a given area are higher than the public perception of that performance, revealing a need to keep the public better informed.

Fig. 1

The Planning, Evaluation and Resource Management (PERM) Model and Its Relationship to the Planning, Implementation and Evaluation Process



Planning should involve a cross section of community members who can help determine goals and objectives and assess needs in relation to the specific requirements of the local district. If the district is performing well it can continue its present course, but if present and future needs are discovered, changes should be considered. Where discrepancies between perceived needs and actual performance do exist, problems may be avoided by initiating action to resolve the matter. Whether the district discovers areas that need change or not, it cannot proceed blindly with no regard for the public it serves.

By using the PERM model techniques, the district can also allocate increasingly scarce resources more wisely. A knowledge of problem areas and priorities is important when preparing budgets and making decisions concerning federal, state and local grant applications. (See *A Practical Guidebook for Developers of Educational Grant Proposals*, available from the Bureau of Research, Planning and Evaluation, Connecticut State Department of Education, Box 2219, Hartford, CT 06115.)

Who Should Plan?

While there are no hard and fast rules regarding who should handle planning, district size is, of course, a major factor. In the largest districts, a planning and evaluation unit is desirable. However, most districts should find one full-time planner/evaluator sufficient, and in the smaller districts, the superintendent or an assistant might handle these functions. Consultants could be employed on an ad hoc basis for assistance and specific technical tasks. To be effective, planners must work closely with the top decision-makers, i.e., the superintendent and the Board of Education. Planning and evaluation cannot occur in a vacuum. The information produced must actually be used by the decision-makers.

The planner/evaluator must possess skills in human relations and community relations, as well as process skills. He must also be able to work with projective, analytic, management and programming models and have the ability to create goals and objectives and to understand the implications of a variety of data.

When Should Planning Begin?

Planning should be a continuing process. It is wrong to assume it can be postponed. It is common to put off formal planning because new funds or programs are anticipated, a new board is imminent, or a new state or federal program or policy is in the works. Good planning is fluid — it promotes adaptive response to change — and it should facilitate transitions of any nature.

Contrary to popular opinion, it is not necessary to begin planning at a specific point such as goal development and conclude at another specific point such as evaluation. Planning may begin at virtually any point for it is a cycle, not linear with a beginning and an end. For instance, a district which has completed an evaluation of on-going programs may begin the process at this point by developing goals and strategies based upon the results of its evaluation. Or a district which has just developed a new budget and programs may begin with an analysis of these proposals to determine the goals implicit in them. This analysis becomes the point of entry into the planning cycle. In other words, all activities need not come to a halt because comprehensive planning is about to begin.

THE PERM MODEL

THE PERM MODEL

The Planning, Evaluation and Resource Management (PERM) model is designed to improve school operations through a series of well-defined steps. This model proposes a joint venture between state department staff and local school districts. The Department of Education will provide technical assistance in the form of publications, guidelines, training workshops and consultation. Local school districts will develop appropriate procedures, conduct evaluations, and analyze results for internal program adjustment and management purposes. PERM provides a framework for integrating several state requirements into one planning process.

The PERM model comprises four phases: phase I - defining goals, phase II - identifying needs, phase III - evaluating programs and phase IV - allocating resources. These phases were designed so local school districts may proceed from goal setting through resource allocation over a six-year period.

The full implementation of the PERM model will span eleven years (1980 to 1991) and include two complete cycles (cycle I, 1980 to 1986, and cycle II, 1986 to 1991). Each cycle will contain the same four phases, but will differ in emphasis.

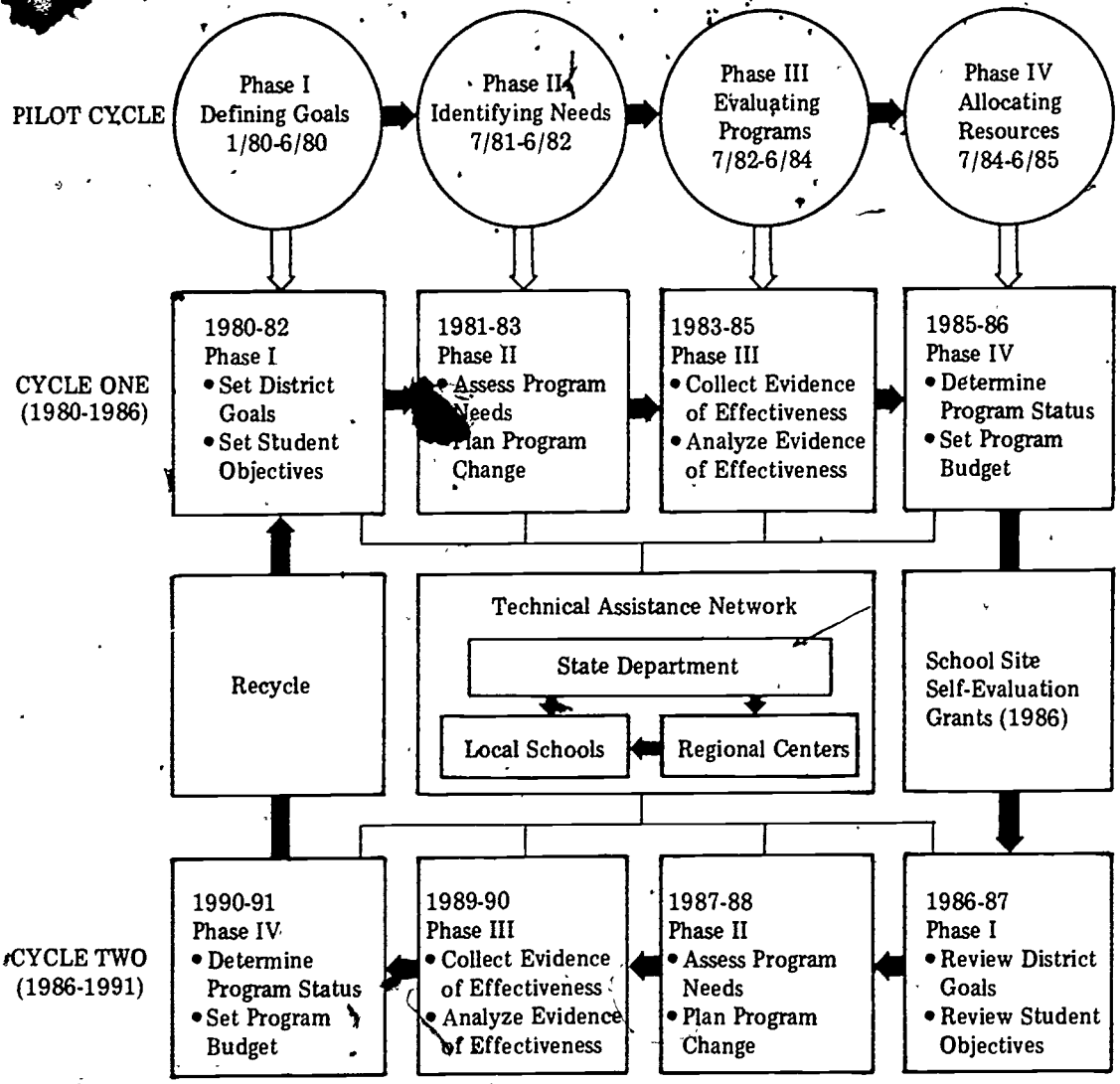
The first six-year cycle will be developmental. During this period, the state department staff will provide concentrated, intense and systematic technical assistance to local school districts. With the assistance of selected pilot school districts, the department will concentrate on developing procedures, guidelines and prototypes to be adopted throughout the state on a phase-in basis. Each of the four phases of the model will be pilot tested in the year preceding its actual use.

The second five-year cycle will focus on modifying existing strategies and sharing evaluation resources among school districts. During this period, the concept of *school site self-evaluations* will be stressed, using local personnel, proven techniques and stimulated by state grants. The state department will continue to provide assistance throughout cycle II. However, primary emphasis will be placed on local self-help programs which will use resources already existing in the field. See Fig. 2 for a graphic representation of these cycles.

A Technical Assistance Network will be established to provide local districts with support services regarding the development of strategies, methods and procedures for accomplishing activities required during the model's four phases (see Fig. 2). The network will insure that the school districts that need it most will receive systematic and coordinated support. Field service offices will be established within each of the regional education service centers (RESC) to provide quick and responsive action for districts experiencing difficulty within any particular phase of the model.

Fig. 2
A Graphic Representation of the BERM Cycles

(The dates presented in cycles I and II below indicate the projected dates for development of department publications and are not meant to imply that local school districts have to follow a similar timeline. Districts that are ready to begin the needs assessment phase or any other phase prior to the dates indicated should proceed.)



Phase I: Defining Goals

During the first phase of the PERM model, local school districts will develop educational goals and student objectives, as required by the Connecticut General Statutes (PA 80-166, Section 10-220(b)). The goals will be similar to the "Statewide Goals for Education" adopted by the State Department of Education. Student objectives will define specific expectations for students in relation to these goals.

Goal setting defines "what should be," i.e., the desired results of the planning process. These goals will usually be broad and may be phrased in terms of the expectations for students or the system. For example, a goal might be that "the schools should help every student to acquire basic skills in obtaining information, solving problems, thinking critically and communicating effectively."

These goals will generally be developed without reference to data regarding the schools' present performance. Instead, participants will be asked what they want their schools to do. The resulting goals will generally be statements of optimization or desirable ends. In some models (such as that of Phi Delta Kappa*), participants are presented with a standard, pre-developed list of educational goals and are asked to rank or prioritize them. In other procedures, the goals are developed during meetings or group discussions and are "unique" to that group. However, it has been observed that when compared, the goal statements from various districts' goal development processes are usually quite similar. Most educational goals tend to be variations on a list of about 20 major goal statements, but individual districts tend to select only five to ten as major concerns and also tend to assign different priorities to similar goals.

The key to a successful, meaningful goal determination project is broad-based participation. Parents, all segments of the community, teachers, administrators and students should be included. There is no rule as to the correct number or percentage of participants, although the more community involvement, the better. It is most important that participants feel they have an opportunity to participate on a meaningful level. Tapping the opinions of "leaders" only is not usually sufficient.

To invlove as many citizens as possible, the process should not make burdensome demands on people's time. It is unrealistic to expect most parents and citizens to attend a long series of sessions which last for hours. The relatively small percentage of individuals who would commit themselves to such projects would not usually be representative of an entire district.

All segments of the community must be able to understand the goal development model and its purpose. If there is a significant non-English speaking population in the district, translations must be provided. Goal statements should be reached through community consensus and should be meaningful to the district decision-makers, as well as comprehensible to the public. They may or may not be placed in priority order. For maximum value, decision-makers should also understand the areas of agreement and disagreement within the district, i.e., where differences lie and which groups, if any, have different goals and expectations. You must know what people want before you can plan with them.

* For further information write. Center for Dissemination, Phi Delta Kappa, Eighth and Union Sts., Bloomington, IN 47401.

In addition to the development of goals during phase I, student objectives will also be developed. Student objectives are defined here as what students are expected to achieve as a result of the local instructional goals. These results may relate to specific curricular programs (e.g., math, reading, etc.) and may reflect expectations of students in general or those at particular grade levels or in specific groups.

Although the student objectives are meant to be more narrowly defined than the goal statements, they will not be as specific as individual student instructional objectives would be. The objectives will serve as a frame of reference later in the PERM model when specific program offerings are analyzed for strengths and weaknesses.

The key to a successful objective-setting strategy is to involve as many types of educators as possible. Members of the teaching staff and the central office staff, faculty members of local institutions of higher education, state department consultants, and others who have a knowledge of curricular matters may be included.

Phase II: Identifying Needs

The first step in program improvement is to zero in on areas of greatest need. For this reason, needs assessment must precede the program analysis step in our model.

Needs assessment involves reality testing. At some point, either at the beginning, or after the general goals have been determined, the district must ask itself, "Where are we now?" For instance, the district may have the goal of "producing excellence in basic skills," but it is important to know how well the goal is already being met and how far the system still has to go to accomplish it. To determine a *need*, the district must assess present conditions and determine the discrepancy between these conditions and the desired goal.

During phase II of the PERM model, each district will conduct a needs assessment in order to rank instructional goals by priority. One way of accomplishing this is through a needs assessment survey. For example, survey respondents would. (1) rate the importance of each goal on a scale, and (2) rate how well they felt each goal was being met in the current public school program. The mean ratings for each respondent group could then be ranked. Need would be identified by the discrepancy between goal expectation (importance) and goal accomplishment (attainment).

Once the goals have been ranked, the district must decide on a manageable number of goals to include in the next step — program analysis. A desirable cut-off point is where the discrepancy between goal expectation and goal accomplishment is zero, i.e., when the degree of expectation equals the degree of accomplishment.

Therefore, as the final step in needs assessment, the discrepancy between "what is" and "what should be," or the distance to reach each goal, should be stated. This discrepancy gap, or need, is always related to the goals, not the difficulty anticipated in reaching them. By combining the perceived importance of the goal and the gap between present efforts and desired results, it is possible to rank the goals by priority before moving on to the next phase of the planning process.

For example, district goals to be ranked might include: (1) learn how to be a good citizen; (2) develop basic skills (reading, writing, speaking, listening); (3) develop a feeling of self-worth; and (4) gain information needed to make job selections. The goals which should be given high priority are those which rank high in importance and low on performance.

Following the selection of high-priority goals, the district identifies instructional programs (e.g., by content areas and grade level) which directly relate to these target goals. Key program elements or activities are then described and program expectations (i.e., anticipated student outcomes) are identified. Once these key programs have been determined and the expectations defined, the district can decide what indicators will be used to evaluate program effectiveness in the future.

Program analysis should begin with a problem statement which answers the following questions: What are the objectives for program improvement? Who is expected to learn what? What kinds of problems are preventing movement toward the desired results? What are the probable reasons for the problems?

For example, a problem statement for a reading program at the district level might be: 400 Spanish-speaking students are reading more than two years below grade level because they have difficulties comprehending and speaking English and because our teachers are not trained to teach students with non-English-speaking backgrounds. We would like to see the number of students in this category reduced from 400 to 50 within a year.

Most methods of program analysis seem to employ a variant of the "force field analysis" technique. The steps in this method are as follows: 1) a program objective is determined; 2) the barriers and constraints (or negative sources) to achieving the objective are listed and examined; 3) positive forces are also listed and examined; and 4) positive and negative forces are rated in terms of potential impact and difficulty of accomplishment.

The program analysis step may be carried out by one or several staff members, the superintendent, planners, middle-level administrators, teachers, consultants or committees, and task forces. Again, the extent of the problems and the available resources will dictate the allocation of manpower for the analysis. Accurate data and identification of constraints, influences, resources and related factors are critical to this step. Sometimes data gathering must go beyond the district to the region, state or nation if comparisons are to be made. Often the product of this phase will be lists of program strengths and weaknesses and objectives for improvements. If done properly, the program analysis will provide a natural introduction to the following step: the generation of alternatives.

The analysis step should indicate which directions are most practical to pursue. Solutions which would meet with resistance or those that would be too expensive may be quickly eliminated. Alternative solutions may be suggested by the "weak" points in the force field analysis. The best strategies have the strongest positive forces aligned against the weakest negative ones.

Alternative solutions may be generated in various ways. A useful starting point is "brainstorming" in which alternative solutions are presented as rapidly as possible in a group setting, then discussed, analyzed and refined.

Specialists, consultants, various staff members and task forces may also be employed to develop alternative solutions. Research sources such as ERIC should be investigated. The alternative methods should be analyzed in terms of effectiveness (quality), cost and time required (resources), consequences on other goals, impact (quantity), political feasibility and other side effects, both positive and negative.

Technical tools should also be applied when developing alternatives. These include program budgeting, cost-benefit analysis, projective techniques and research and literature reviews. After using the various methods, a list should be made of alternative solutions or courses of action, itemized with their costs and their estimated impact on overall program objectives.

At this point, policy and/or program alternatives may be chosen. While the choices must ultimately be made by the decision-makers (the Board of Education and the superintendent), they may ask staff or the planning group to choose or ask them for recommendations. Although the responsibility for decisions rests at the highest levels, a program, especially one involving change, has the best chance of success if those directly affected play a major role in its development.

There are many methods to use when selecting among alternatives. Some decision-makers prefer rational techniques while others prefer to "fly by the seat of their pants." The most logical approach to use is some variation of a ranking. For example, using a model developed in Fresno, California,* an arbitrary score (ranging from plus four positive effect to minus four negative effect) is assigned to each of the proposed solutions. A separate ranking is assigned for each of a variety of factors: staff reaction, community reaction, student reaction, costs, availablity of resources, time needed to implement and success of similar ventures. It is then possible to derive a cumulative score for each alternative and rank the scores. The factors to be rated may vary to suit the decision-makers, and more sophisticated variations can provide for a system of weighting factors.

Without effective implementation, the entire planning process can be reduced to a meaningless exercise. Planners cannot guarantee success in implementation, but the chances for success will be improved if an implementation schedule is provided. The Fresno model provides a good summary of the steps which should be included in any implementation plan:

1. Reassess the problem and solution.
2. Outline the major activities.
3. Consider all the groups and agencies which will be affected by the program.
4. Identify remaining constraints.
5. Identify all the activities and sub-activities and the persons who will be responsible for carrying out each of these.
6. Plot the calendar assignments and activities. Included target dates. A PERT diagram or other easily understandable chart is helpful and clarifies areas of responsibility.

In addition, a good plan should include feedback from continuous monitoring to keep the plan "on course."

* For further discussion see *Goals to Action*, Fresno County Department of Education, 2314 Mariposa St., Fresno, CA 93721.

Phase III: Evaluating Programs

For our purposes, the term program evaluation will be defined as the process of determining how well the goals and objectives of the planned program(s) have been, or are being, achieved. Most educators are familiar with product or summative evaluation, the assessment of conditions at the close of a project period (e.g., one school year). Product evaluation asks the retrospective question, "How well did it work?" Phase III of the PERM model is designed to address this summative question.

However, the planning process must also rely upon process or formative evaluation, i.e., periodic checks on the progress of the program. Formative evaluation can be a part of the planning process and take place during needs assessment and program analysis. Information generated through this process can be the foundation for necessary and periodic revisions in a program. Therefore, evaluation should begin when planning begins.

During the third phase of the PERM model, data relating to the progress of the program will be collected and analyzed. The tools for conducting such summative evaluations are numerous. They include standardized instruments (achievement and aptitude tests, attitude scales, performance tests); non-standardized instruments (criterion referenced tests, rating scales, reports, surveys, recordings and video tapes, logs and records); and personalized techniques (interviews, observations). Test scores and/or other indicators will be collected over a two-year period in phase III thus allowing for longitudinal comparisons. School districts may wish to tie this phase into state (e.g., EERA, CAEP*) and/or local testing programs.

The planner and decision-maker(s) should begin working with the evaluator from the outset. In this way, it is possible to obtain data which can, and will, actually be used in making decisions. Although planning and evaluation are not the same, the two are interrelated; one cannot be fully effective without the other.

Phase IV: Allocating Resources

Without information concerning the results of previous policy decisions, a system can do little to predict the success of future programs. During the fourth and final phase of the PERM model, evaluations from phase III are used to assess the relative merits of continuing selected program(s). For example, analysis of program feedback may indicate that current policy decisions regarding certain programs are not advancing the district goals. This analysis, in turn, will affect the budget-setting process (e.g., decreasing expenditures or eliminating programs).

Therefore, the principal questions addressed by phase IV of the PERM model are:

1. Have previous decisions concerning district programs facilitated movement toward stated goals?
2. Should programs evaluated in phase III be continued as is, modified or terminated?
3. Is funding available to continue the program in its present form?

* EERA - Education Evaluation and Remedial Assistance Act, CAEP - Connecticut Assessment of Educational Progress.

Using evaluation data during the policy-making process is one of the major challenges local school districts face when trying to sharpen their planning procedures. The present lack of a practical model only compounds the problem.

By its nature, evaluation is making value judgments concerning the progress of educational programs and practices. However, the responsibility for judging the merit of programs seldom rests solely with the evaluator; it is usually shared with administrators. At this level, empirical evidence is only one criterion upon which judgments are made. Other factors such as timeliness, pervasiveness, political pressure and public opinion are also important.

The educational administrator or board member must often straddle the gap between empirically-sound and politically-expedient decisions, employing policy assessment as a hedge against adopting ill-conceived policies. Phase IV of the PERM model attempts to remedy this dilemma by tying program evaluation into the budgeting process.

Effective leadership depends on the assessment of needs and resources and the interpretation of both in the light of information concerning the value of programs.

Recycling

Planning, to be effective, must be a continuing process. Although few districts can conduct each planning phase every year or two, it is necessary to recycle the entire process at periodic intervals. For example, goals should be reassessed every five years, program activities must be monitored continuously and evaluations must be conducted regularly. These can provide a regular review of the plans and programs, and corrective measures can be taken if necessary. Without such a cyclical view of planning, it is unlikely that long-term, satisfactory results will be obtained.

GLOSSARY OF PLANNING TERMS

GLOSSARY OF PLANNING TERMS

The following terms, and their definitions, have been compiled, modified and adapted from *Comprehensive Planning in Education: A Planning Handbook for Districts (No. 1)*, New Jersey Department of Education; Division of Research, Planning and Evaluation; Bureau of Planning; Trenton, New Jersey, 1975.

Assessment: The act of gathering data, pooling information and making comparisons.

Audit: See Education Program Audit.

Behavioral Objectives: A precise statement which answers the questions: *Who* will do *what*, *when* and *how well?*

Benefit-cost Ratio: An economic indicator of efficiency computed by dividing benefits by costs.

Budgeting: The process of translating planning and programming decisions into specific projected financial plans for relatively short periods of time. A precise statement of the distribution of fiscal resources.

Community: All those individuals within the geographic boundaries of a particular school attendance area of a school district who will be affected by the educational process taking place.

Comprehensive Planning: A complete planning process which includes the following components: pre-planning, goal development, needs assessment, problem analysis, generation of alternative solutions, selection of alternatives, implementation and evaluation.

Planning which involves: (1) consideration of all relevant factors; (2) participation of all agencies and persons who should contribute to the development of a given plan, middle- and long-range planning, not short term.

Concerns Analysis: The process of identifying all relevant facts, values and policies related to a concern expressed by individuals or organizations in the community; a technique used in problem identification.

Context Evaluation: Evaluation with the purpose of providing a rationale for determination of objectives for the system. It defines the environment, identifies unmet needs and unused opportunities and diagnoses constraints preventing their attainment.

Cost-benefit Analysis: An analytical approach to decision making and problem solving involving the definition of the objective and identification of the alternative that yields

the greatest benefits for any given cost or a required or chosen amount of benefits for the least cost. The analysis usually involves quantification (in dollars) of the alternative results or products as a result of dollars invested.

Cost Curve: A graphic representation of the relationship of cost to another variable, such as the product. It is conventional to construct these curves with costs along the vertical axis and the related variable along the horizontal axis.

Cost-effective Analysis: An analytical approach to decision making and problem solving requiring definition of objectives, generation of alternatives and identification of the alternative that yields the greatest effectiveness for any given cost or a chosen degree of effectiveness for the least cost. The term is usually used in situations in which the alternative products cannot easily be quantified in dollars.

Criteria: Premises on which priorities are established among alternatives in order to measure relative degree of desirability.

Critical Path: In P.E.R.T. and other network-based management systems, that sequence of events and activities that has the longest path through the network of anticipated events.

Decision Matrices: A method of allocating resources, determining priorities or selecting goals by graphically displaying the relationships of multiple interdependent variables in two or three dimensions. For example, one dimension of a decision matrix in education might be available funds while the other dimension might be faculty salaries, maintenance costs, library costs, etc.

Decision Variable: A variable which can be controlled, its value can be chosen as a result of a decision. The decision variable might be the amount of food one must eat to satisfy hunger.

Delphi Technique: A procedure for systematically soliciting and collating the opinions of experts on the future of a preselected subject through individual interrogations, usually by questionnaires. An attempt is made to achieve a convergence of opinion and eventually consensus by the feedback of results to the participants and recycling the process.

Deterministic Models: A mathematical abstraction of real-world phenomena; a set of relationships among quantitative elements. parameters, variable inputs and variable outputs.

Discrepancy Analysis: The process of determining and analyzing the need, i.e., the gap between what is and what should be.

Educational Planner: A person skilled in applying planning technology to the solution of educational problems and whose job assignment is concerned wholly or in large part with educational planning.

Education Program Audit: An audit, or check, on the evaluation process, rather than an assessment of the program or project being evaluated. An audit can determine the appropriateness of the evaluation techniques used and evaluate the manner in which it was, or is being, conducted.

Effectiveness: The performance or output received from an approach or program. Ideally, it is a quantitative measure which can be used to evaluate the level of performance in relation to some standard, set of criteria or end objective.

Evaluation: Activities undertaken in an attempt to determine the value and/or success of a program, project, technique, etc.; the act of making judgments based upon the data gathered.

Flow Chart: A pictorial description of a plan showing the interrelationships of all required events.

Force Field Analysis: A decision-making, problem-solving technique in which values are placed upon positive and negative forces affecting goal attainment.

Formative Evaluation: The process by which evaluation data concerning on-going implementation is provided to decision makers. It provides periodic checks to answer the question, "How well is it working?"

Functional Analysis: The process used to determine what functions or jobs must be done to accomplish the mission objectives.

Functions: In the context of the system approach, those actions which must be taken to accomplish the overall job.

Futures/Futuring: The use of techniques for the purpose of systematically exploring and comprehending future possibilities.

Gaming: A means of providing a simulated operational present or future environment to make possible multiple interactions among competing or cooperating players. (Not to be confused with game theory.)

Generic: Relating to or characteristic of a whole group or class: general (Webster). A generic problem-solving model is one which ostensibly may be applied to the process of seeking a solution for all problems of the kind for which the model is designed.

Goal: A statement of broad direction, general purpose or intent. A goal is general and timeless and is not concerned with a particular achievement within a specified time.

Goal Indicator: An occurrence or state of being that would be in effect should a goal be met. A fact or factor that will illustrate or amplify the goal statement.

Incremental Change (Incrementalism): Change on a piecemeal basis, in which each step represents a slight shift from the status quo. Often referred to as "muddling through," it represents an alternative to thorough comprehensive planned change.

Indicator: A factor which is used to estimate the degree of goal attainment.

Innovation: Educational innovation is a new or different concept, methodology, organization or program that is systematically introduced into the classroom, school system and/or the state.

Interface: In the system approach, the term applies to the specific relationship and/or interaction between elements or components of the system.

Interim Performance Objective: A behavioral objective that is one step or phase in the achievement of a selected final performance objective.

Iterative Process: A process for formulating a desired result by means of a repeated cycle of operations, which comes closer and closer to the desired results.

Long-range Planning: Planning which looks beyond the immediate problems of the next five years. The specific length of time considered is arbitrary.

Management by Objectives (MBO): A managerial technique designed to improve managerial performance through clarifying individual responsibilities and authority and relating them to results that must be achieved.

Management Model: A design for implementing the operations model. It includes (1) administration requirements, allocation of responsibility for function, (2) tasks, flow of operations (PERT); (3) costs, budgets and evaluation.

Methods-means Analysis: The identification of all possible methods (strategies) and means (vehicles) for implementing each strategy and the listing of the advantages and disadvantages of each for achieving one or more of the specified performance requirements identified in a system analysis.

Middle-range Planning: Planning which covers a span of about two to five years.

Mission: What is to be accomplished, whether it be creating a product, providing a service, or changing a condition.

Mission Analysis: The first major function involved in the analysis of a problem. Mission analysis includes: (1) defining the overall mission objective, (2) determining the mission performance requirements, (3) determining mission constraints, and (4) determining the mission profile.

Mission Objective: A precise statement expressed in operational terms which identifies the overall intent of a mission.

Mission Profile: The major functions which must be performed to accomplish a mission. These functions are arranged in logical sequence and depicted in flow-chart form.

Model: A generic description which may be applied to a related set of processes or situations. A schematic representation of the relationships that define a situation under study.

Monitor: To collect and analyze feedback during the implementation (on-going) phase of a program or project.

Need: The difference between "what is" and "what should be." All institutional needs must be related to learner needs. Needs should be related to a problem rather than a solution.

Needs Assessment: A systematic approach to identify the discrepancy between "what is" and "what should be."

Network: A flow diagram showing the activities and events which must be accomplished to reach the program objectives and their planned sequences of accomplishment, interdependencies and interrelationships.

Objectives: Desired accomplishment which can be measured within a given time and which, if achieved, will advance the system toward a goal. Quantifiable desired outputs within a time and space framework. By achieving the objectives, progress toward the goal is advanced.

Operational Philosophy: An accumulation of identified values that are used to guide the problem-solving approach. It is an organized arrangement of all of the values generated through the concerns analysis procedures.

Operational Simulation: The manipulation of a mathematical or mechanical representation of a system or process, so that, by plugging in real or potential changes in the system environment, it is possible to observe the operation of the system under a variety of conditions.

Operations Model: A design for producing the system products. It includes procedures, tasks, jobs, designs, equipment, method-means and performance criteria.

Operations Research (OR): The use of analytic methods adopted from mathematics and other disciplines for solving operational problems. Among the common techniques used in O.R. are: linear programming, probability theory, information theory, Monte Carlo methods and queuing techniques.

Parameter: A value which is held constant during some calculation. The parameters of a system or model are characteristics, some of which may be assigned selected values while examining the effects of variation of other characteristics of the system.

Participatory Planning: The involvement in the planning process of all groups and individuals (or representatives) affected by the educational policy.

Performance Budget: A budget, based upon functions, activities and projects, whose principal analytical orientation is the measurement of efficiency of operating units. For example, such a budget in an agency might require computation of the cost per unit of mail processed for one branch of the agency and the cost per loan application processed in another branch.

Performance Objective: A clear precise statement of what the learner is to do to demonstrate competency at the end of a prescribed learning period. It describes how the learner is to demonstrate his/her competency and how well the learner is to perform in order to demonstrate that competency.

Performance Requirement: A series of criteria or standards by which the success or failure of the system or mission is to be ascertained. Normally, these are comprised of products, specifications, performance characteristics and restrictions; and they allow measurements to determine how well the system is performing with respect to the goal.

P.E.R.T. (Program Evaluation and Review Technique): A set of principles, methods and techniques for effective planning of objective-oriented work establishing a sound basis for effective scheduling, cost controlling and replanning in the management of programs. It employs a product-oriented work breakdown structure, a network flow plan, elapsed time estimates and identifications of critical paths in the networks, a schedule, and analysis of the interrelated networks and other components.

Planned Change: A systematic and logical approach to planning for the future. There are two major aspects to planned change. (1) prediction, the accurate sensing of changing needs as reflected in societal goals, and the determination of necessary modifications in performance that will successfully accomplish these redefined goals, and (2) design, translating the predicted changes into specific individual behaviors relevant to successful completion of the goals.

Planning Capability: An agency's capacity to apply its organizational, procedural, technological and support arrangements to solving any problem which it may face.

Policy Planning: Planning for broad system goals and directions.

P.P.B.S. (Programming-Planning-Budgeting-System): Systematizes the (1) appraisal and comparison of various government activities in terms of their contributions to objectives, (2) determines how a given objective can be attained with a minimum expenditure of resources, (3) projects government activities over an adequate time horizon, (4) compares the relative contributions of private and public activities to stated objectives, and (5) allows for continuous revision of objectives, programs and budgets in the light of experience and changes in circumstances.

Pre-planning: The preliminary steps laying the groundwork for a comprehensive Planning process. Includes obtaining a commitment from decision makers, creating a climate of receptivity and awareness of the activities which will take place within the community and "planning to plan."

Problem: A problem exists when there is a goal to be attained with no well-defined or well-established way of attaining it or when the goal is so vaguely defined or unclear that relevant means for attaining it cannot be clearly determined. A problem is the requirement for a strategy or means to reduce or eliminate a need.

Problem Identification: A part of the needs assessment procedure which identifies relevant facts, values and policies related to an expressed concern and then validates the concern as a problem in terms of accuracy, validity, feasibility and significance.

Program: A major agency endeavor, mission oriented, which fulfills statutory or executive requirements and is defined in terms of the principal actions required to achieve a significant objective.

Program Budget: See Performance Budget.

Program Category: A classification within a program structure which expresses the purpose of the program.

Program Element: A subdivision of a program category which comprises the specific products that contribute to an agency's objective(s).

Scaling: Any one of a variety of techniques developed for the purpose of quantifying and comparing subjective values and attitudes.

Self-study: The phase of a needs assessment in which the system gathers data to assess actual conditions (reality) relating to goals. These results may then be compared to the community and staff perceptions of system performance.

Sensitivity Analysis: A procedure by which different judgements are made about the value of a parameter followed by an analysis of each of the values to see what effects result with each. The technique may be employed when the data base is nonexistent or of such poor quality that other analytical methods cannot be employed reliably.

Short-range Planning: Planning for immediate needs, usually for a time period not exceeding two years.

Simulation: An abstraction or simplification of a real-world situation.

Social Accounting: An effort to conjecture about the future of a nation, social system or institution by determining the "sum" of a series of independent factors.

Sub-goals: Objectives, or partial goals, which must be attained to reach the larger goal.

Sub-system: Any given part of a total system which could in its own context be considered a separate system.

Summative Evaluation: The evaluation of the product of a program or project. It answers the question, "How well did it work?"

System: The sum total of parts working independently and in interaction to achieve a common purpose.

System Analysis: The process of determining the parts of a system and the way in which they relate one to the other and with the total system. It is used during the problem-solving process for identifying problems and analyzing a problem and setting goals.

System Approach: A technological method of problem solving, systematically utilizing formalized principles and analysis and synthesis. A system approach to education would attempt to consider every element in any environment related to a definitive problem.

System Synthesis: The process of determining the most relevant and most practical way to achieve a mission objective.

Target Group: A group within the general population toward which a program is aimed or on which it has a significant impact.

Tasks: Elements of a function which, when performed by people in proper sequential order, will or should resolve the parent function.

Task Analysis: The process of identifying the units of performance to be accomplished in order that the function from which they are derived may be accomplished.

Terminal Performance Objective: A behavioral objective applicable to the end product. In one context, terminal performance objectives may apply to the student product as he completes grade twelve, in another, they may apply to the student at the end of a course; and so on.

Time Line: A graphic depiction of the occurrence of activities, past and/or future, in temporal sequence.

Variable: A characteristic which can take on different values.