

## Planning and Evaluation Within the Hawaii Curriculum Center

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Because planning and evaluation constitute two processes within a complex operating enterprise, a discussion of these processes in the Hawaii Curriculum Center requires a preliminary overview of the total Center operations.

### *Rationale of Center Operations*

The Hawaii Curriculum Center carries on its work within the scope of a statement of explicit theory about the job to be done. This framework provides the staff with both well-defined courses of action and the means by which to assess results.

*Systems approach to organization.* — A theory of operations based on a *systems approach* governs the work of the Center. Borrowed from the language of modern technology, this term signifies a way of working on complex, multidimensional projects which takes into account the roles and interrelationships of all parts of the total system. Simply put, a systems approach is a rational way of using a given set of resources to produce an organization capable of attaining a given set of objectives. This approach emphasizes rigorous analysis both of operations and their time dimensions, and provision for

self-correction of the system and its subsystems.

Organizationally and operationally, the use of a systems approach requires that every part of the Center relate itself and its work to every other part of the structure. The Center has three kinds of parts or subsystems: management, projects, and services. Each part is analyzed; each part has its own explicit goals. The entire organization of planners, researchers, Laboratory School and field school teachers, administrators, and technicians must operate as a single network whose common goals are understood and sanctioned.

*Systems approach to management.* — In the systems approach, management is planning, organizing, motivating, and controlling human and material resources and their interactions to attain a predetermined objective. The focus of management is on setting policy and making decisions. Its first phase is the assessing of the context of the organization. Assessment requires analyzing the purpose of and the limitations and constraints on the organization. Based on this assessment, objectives are specifically determined and communicated. In the second phase a plan of action is developed to ac-

complish the objectives. Then, during the third phase, these plans are converted into schedules within the limits of available human and financial resources. If the constraints are to be loosened, new funds and personnel must be procured. In phase four regular reporting and concurrent evaluation of progress against schedule and cost estimates occurs. The fifth phase is decision and action with respect to the progress made toward the objectives. The final phase is the recycling of the process to incorporate desired new actions into new cohesive plans. This process of management is essentially that practiced in the Curriculum Center.

Reinforcing the systems approach to management is a widely used tool, Program Evaluation and Review Technique (PERT), which the Center early decided to employ for guiding and controlling all of its projects. PERT, developed originally to monitor the complicated construction of the first Polaris submarine, is a set of principles, methods, and techniques for effective planning of objective-oriented work which establishes a basis for efficient scheduling, costing, controlling, and re-planning in the management of once-through or first-time-through

programs or projects. It requires that the objectives or outcomes of a project be specified as concrete end items or products: objects, equipment, decision statements, facilities, data reports, or services. As the objectives are broken down successively into smaller items, a work breakdown structure is produced. Major objectives are linked to their constituents and interrelationships are revealed. Next a logical network of events leading to the achievement of end items is developed. Activities necessary to accomplish each event are listed. A PERT network diagram graphically portrays the interfaces, relationships, and constraints on the achievement of end items (objectives). Next the network is given time dimensions for each event based on estimates of how long it will take to perform the activities producing each event. Then a determination of the path of maximum time is made. Sometimes cost data are applied to each event. The next step is the development of a schedule based on calendar dates which attempts to balance the objectives, the network, and the available human and financial resources. Usually it is necessary to replan the network at this stage. Then, as work is performed in accord with the PERT, continuous evaluation and review through reporting in relation to the network ensue. The PERT network is regularly revised to accord with the actual conditions.

The use of PERT enables the Center planners to make the most efficient use of people and resources to achieve stated objectives. It helps staff members understand the scope of the work and the relationship among the parts; it delineates the individual responsibilities of each. It yields time estimates for each phase of an operation and points up staffing shortages. It measures actual performance against expected per-

formance. It allows for changes in plan with minimum dislocation of people and minimum disruption of the work in progress. Most important, PERT reduces the uncertainty inherent in making decisions that have complex and long-range implications. By forcing planners to map out essential steps and their logical sequence into a network, PERT imposes a rigorous analysis of operations which shows clearly which work must be done and when it must be completed in order that next steps can be taken.

In the context of systems, *evaluation* takes on new meaning. Instead of a single, external procedure it becomes a continuous process, primarily integrated. Simply defined, evaluation is the process of acquiring and using information for making decisions; in educational practice it is associated with everything from assessing the context of a given program and determining its objectives through planning, scheduling, implementing, and recycling program activities. For evaluation in this sense a constant flow of information is needed for making a great variety of decisions in order that a program may be altered while it is in progress. The use of the Program Evaluation and Review Technique is invaluable in meeting these demands.

*Systems approach to curriculum practice.* — For an enterprise like the Hawaii Curriculum Center whose objectives are curriculum design, development, and demonstration, two additional elements are necessary for a theory of operations: first, a systems approach to curriculum practice, and second, a theory of curriculum practice.

The prime element in a systems approach to curriculum practice is a subsystem on developing theory. The first development is *a theory of the particular study* under consideration. This theory becomes a model for

devising *a theory of the curriculum in that study*. Research, as part of this subsystem, is aimed at the development of such theories.

The next subsystem is *development*, which depends upon prior theory. Within the development subsystem are a number of sequentially related parts. The first may be identified as *design*, the best fit of theory of the curriculum in the study under consideration with the particular real world of students, teachers, and schools. The design accounts for such elements as target students, objectives, program sequence, courses, level, materials, time, and space. The next part of development is *construction of components, field testing, and revision*. As each element called for in the design is produced, it is tested and revised until it satisfies its criterion. The third element is *assembly of components* into a program or course. And finally *program testing* in schools ensues.

The third major subdivision is *diffusion* to the schools of the curriculum program or course produced. The operation of diffusion has two parts: wide *dissemination* of information about the curriculum program through various media and *demonstration*. In demonstration a curriculum program or course is taught for the objectives and in the manner set forth in the program. Systematic collection of evidences of the internal consistency of the plan of the course or program and of the external relationships to students and schools in which the demonstration takes place are required.

The fourth and final subsystem of curriculum practice is *adoption*. Within this subsystem are three elements. The first is *in-service training* with the curriculum for teachers who will teach the course or program. This provision is indispensable if the curriculum change is really to occur. *Installation* is the

element of providing the teachers, materials and equipment, and money for all of these in each school in which the program is installed. The final element in adoption, and consequently in the entire curriculum practice system, might be termed *institutionalization*: the new curriculum is taught in all schools, regularly resourced, and believed competent.

The categories of output of the system of curriculum practice are 1) student materials; 2) teacher materials, both specific suggestions with regard to the student materials and self-study materials for background; 3) evaluation rationale, procedures, and instruments; 4) plans for organization of time, space, and students; 5) prototype collections of library books, media, and equipment; 6) proposals relative to decision-making in the curriculum area; 7) proposals relative to faculty governance; 8) proposals for teacher preparation and certification in the curriculum area; 9) plans for dissemination of information about the curriculum; 10) plans for maintaining the dialogue in the curriculum area; 11) demonstration of the curriculum; 12) plans for installing and institutionalizing the curriculum in a school system; and 13) a product evaluation for decision groups involved in adoption of the curriculum.

The Curriculum Center plans and executes the subsystems on the theory of the study and program development; it generates plans for the subsystems on demonstration and adoption. In a very direct way the curriculum practice system and its output categories have entered into the PERTing of projects. The categories provide a list of the general types of output and criteria for planning projects and evaluating their progress.

*A theory of practice of the liberal*

*curriculum.* — The final element in a theory of operations is a theory of practice of the curriculum. The liberal curriculum is defined as a planned series of encounters between the student and some selection of the communities of discourse (more commonly known as the disciplines of knowledge); a non-liberal curriculum is similarly defined as a series of planned encounters with the community of practitioners of a given technology or craft. At present the Center has projects only in the liberal disciplines.

A discipline is a human community whose members have a characteristic mode of knowing and doing which has demonstrated itself to be the most effective pattern for gaining, warranting, and integrating knowledge which is within its domain. Out of this community evolves that system of simplifying raw experience and synthesizing concepts or patterns of norms into evolving structures of warranted knowledge which is commonly called a discipline of knowledge.

While each community of discourse or discipline of knowledge is unique and autonomous in defining itself, common characteristics can be distinguished. A discipline is first and foremost a community of persons. These persons have a characteristic way of gaining new knowledge entwined with a characteristic but evolving structure or organization of knowledge. Members of such a community are part of a supra-personal tradition. They have a system of symbols or notation—a special “language.” They tend to have a distinguishable range of stances toward the world, involving a mixture of values and patterns of emotional responses. The community or discipline has an instructive character through which it recruits new members. It has a history and a future discernible in its institutions,

its artifacts, its communication networks.

The design of each Curriculum Center project will explicitly confront and answer or dispose of the questions posed below for a discipline of knowledge. The answers will be reflected in the program output.

1. In what ways can the discipline be characterized as a community of persons?
2. What is the role of imagination (novel and inventive thought and action) in the discipline as conceived by members? Is it feasible, for example, to think of “historical,” “sociological,” “philosophical” imagination, and so on?
3. What is the domain of the discipline; i.e., on what institutions, materials, systems, processes, or other aspects of man or nature do members focus their attention?
4. What is the history of the idea of the discipline? What are the traditions and unifying commitments of the community?
5. What modes of inquiry are characteristic of members of the community?

More specifically:

What does a practitioner *do* when he makes or gets new knowledge?

What are his goals?

Where does he begin his inquiry? What is the role of theory in the discipline? What evidence is he willing to consider? What is his relationship to the evidence? How does he “handle” these evidences? Is there a related technology?

How are his findings categorized?

What guides his interpretation of findings?

What is the end point of

his inquiry, the nature of his findings?

What are the rules of truth or warranty as revealed by his actions?

How does he report new knowledge to his fellows?

What skills are requisite to work in the discipline?

Have newer modes of inquiry been added to the discipline recently?

6. Does the discipline have a conceptual structure? What are the key concepts which provide the present underlying organization of the discipline? If there is not a conceptual structure, how are the substantive concerns organized?
7. What system of symbols or "language" does the community employ? Is there a specialized system of notation? vocabulary?
8. What is the network of communications and heritage of materials (books, artifacts, works, scores, compositions, performances, and so on) of the discipline?
9. What is the characteristic view and range of views of man and nature represented in the discourse and actions of the community? What are the explicit or implicit value assumptions of the community? What is its characteristic stance toward the affective side of life?
10. How is the discipline organized for teaching and learning? What are the communities of closest kinship? On what is this kinship based?

How does the community maintain itself in the intellectual world?

How does it appraise its membership? What is the

nature of the apprenticeship in the discipline?

The design of each Curriculum Center project involving multidisciplinary or interdisciplinary study will honor the pluralistic nature of modern knowledge. Each constituent discipline will be developed in the manner above, with the preservation of all convergences and divergences reflected in the final program output.

### ***Planning and Evaluation Service***

Based upon the systems approach to organization, management, and curriculum practice, and the theory of practice of the liberal curriculum, specific functions were developed for each subsystem of the Curriculum Center: management, projects, and services. The services comprise administration, planning and evaluation, media, and the University Laboratory School. The following list of functions for the Planning and Evaluation Service is a representative example:

1. Work on general strategy and design for director and directorate's review.
2. Develop general prospectuses for projects approved by the directorate (prior to establishment of a project group).
3. Work with project managers on extension of planning for existing projects and on formulation of new projects.
4. Review and analyze plans of each project and section and of new project proposals; compare these to adopted policies.
5. Recommend modifications in these plans prior to directorate review.
6. Monitor all projects (not in supervisory or managerial capacity).
7. Manage designated small proj-

ects.

8. Propose and maintain planning and evaluation schedule (PERTs, reports, etc.).
9. Maintain review of all curriculum research and development centers.
10. Advise the directorate on evaluation problems and procedures.
11. Design specific evaluation projects, instruments, and procedures; carry out approved studies under general strategies adopted by the directorate.
12. Consult with the project managers or other designated leaders on designing specific evaluation procedures and instruments.
13. Advise on activities involving production of evaluation instruments, especially on PERT networks for projects or sections relating to evaluation.
14. Advise, review, criticize, and recommend with regard to the evaluation aspects of project proposals submitted to the Center.
15. Consult with project managers or other leaders on the adequacy of self-corrective features of project design and operation.
16. Advise project managers on evaluation characteristics in formulating and planning of extensions or new projects.

To carry out these functions, a small staff of planners and evaluation specialists has been gathered. Some of the functions are obviously more crucial than others, *viz.*, those which ask for design of general strategies. In this regard, evaluation is especially troublesome. As a specific example of the planning for such a crucial function, the remainder of this paper will describe the design of an evaluation program for the Curriculum Center.

### **Evaluation Program**

The literature of educational evaluation shows a shift in emphasis in this decade. Whereas it used to center on tests and measurements, experimental design and statistics, its language now focuses on decision-making. And though evaluation has traditionally been conceived as the process of testing hypotheses, its aim now is to provide information for making decisions. These shifts in terminology and purpose reflect a new thrust in educational evaluation. As noted earlier, evaluation has come to mean the process of acquiring and using information for making decisions on a broad range of matters. The dual emphasis on assessing information and making decisions enlivens the evaluation procedure by giving it the character of a continuum having direction.

This orientation toward decision-making as the crux of evaluation arose only partly from inadequacies in older theory and practice. It had long been standard procedure to propose a hypothesis, prepare an experimental design to test it, and on the basis of assembled data evaluate a program upon its completion. But more and more the belief grew that evaluation must contribute to the improvement of a program *while it is in process*, that specific and comprehensive data must be available *when the time for decision occurs*, and that the kind of information desired for decision *varies with the kind of decision-making group*. Many of the new beliefs, much of the terminology, and a small but growing body of practice can be attributed to information technologies and the requirements of general systems theory as both are increasingly applied to organizations such as the Hawaii Curriculum Center.

A rather complex third change can be discerned in recent writings

on theory of curriculum practice. Curriculum evaluation is steadily becoming more integrated with curriculum practice. Evaluation is becoming pluralistic, systems-oriented, and primarily internal, essentially a subsystem of the curriculum system itself. Consequently, in a liberal curriculum based on the disciplines of knowledge, the processes of generating, warranting, and organizing knowledge provide models upon which to base evaluation.

*Rationale.* — In order to have an operational evaluation program, assumptions about the nature of evaluation and its possibilities, and some solutions, no matter how tentative, for the many theoretical problems must be advanced. In reviewing these, it is imperative to keep in mind the previously stated rationale of operations. An incomplete list of assumptions includes the following:

1. Evaluation of all aspects of the Center is necessary.
2. All aspects can be approached in a rational way.
3. Psychological reactions differ from empirical and qualitative judgments. Any justified judgment can be shared.
4. Knowledge as well as information is required for sound decision-making.
5. No single view of knowledge (or information) is adequate; a pluralistic view of knowledge is a reasonable stance.
6. The disciplines of knowledge are viable systems of knowing.
7. Among other things, a discipline of knowledge is a way of generating and warranting knowledge.
8. To gain evidences, practitioners of a discipline discover or impose a particular order on existence. (The description of a particular man varies when he is viewed from the perspec-

tives of visual art, philosophy, chemistry, or economics.)

9. Warranting is the justification of judgment according to the canons of evidence in a discipline of knowledge.
10. The justification of judgment involves both the acts of judging and those criteria or standards used in justifying.
11. All data-gathering involves a theory, often implicit, of which data to gather; it is possible to describe clearly what is confronted only in reference to varying but explicable perspectives.

Evaluation, in its broadest sense, is the process of justifying judgments. The evaluation program of the Center includes many models of judgment, not just that of behavioral science. To determine which model to apply to given projects or services, the principle of *consonance* between model and situation governs. Such decisions are essentially collaborative.

Scholars from appropriate disciplines are involved in all phases of curriculum evaluation. The substantive aspects of evaluation procedures and instruments cannot be met generally, only specifically. Because the scholar in a discipline ideally possesses a model for justifying judgments in his own discipline, he cannot be ignored if he protests that a procedure, a behavioral objective, or an evaluative form is inimical to learning or appreciation in his discipline. However, he should be pressed hard for his justifications.

Another aspect of consonance is recognizing what types of evaluation and evidence are most likely to be useful to various decision-making groups. It is not enough to say that evaluation will be useful if it is suitable to the task (valid) and reproducible by others using the same model (reliable). It must be

trusted by decision-makers and intended users of the products and available to all who will need it. What is useful to a school board considering the adoption of a mathematics curriculum will probably differ from that which is useful to a group of mathematicians deciding whether or not to approve a new mathematics curriculum, and from that useful to mathematicians and mathematics teachers designing the curriculum and holding successive trials of their materials in order to revise them.

The assumption underlying the evaluation program is that the planning-writing-teaching groups, because of their scholarly competence in their field, have ultimate responsibility for goal statements, criteria and procedures for judgment, and for the substantive quality of evaluation instruments such as rating scales or tests. Competence presumably includes knowledge of and about inquiry processes and standards used for validation or judgment in the process, and the concepts, patterns, and structure of ideas of the field.

The evaluation specialists on the staff have the responsibility in development work for raising and pursuing, with the project planners, the evaluation considerations and for handling evidences once gathered. They help in analyzing and in making goal statements explicit, in developing clear statements of justifications and procedures of judgment, in designing evaluation instruments, and in developing plans for making judgments with respect to the curriculum after it is developed. They are responsible for planning non-project evaluation efforts, monitoring operations and feedback mechanisms, and for planning overall evaluation strategies.

Evaluation is a collaborative operation. The behavioral scientist evaluator may be the manager and

technical adviser, but he cannot make the multiplicity of judgments required in all branches of learning. Since the Curriculum Center has projects in many domains, it has sought as staff members curriculum planners who are first of all scholars or master teachers in a branch of knowledge and who have some sophistication in the evaluation issues in that discipline or field. Because the number of such persons, while apparently increasing, is small, the Center makes an effort to develop the evaluation skills of its staff members. Since the Center also has general evaluation problems in administration, organization, and production which do not fit easily into disciplines of knowledge, it requires the services of the generalist or behavioral scientist evaluator who applies the general behavioral science models and lore to such problems and shares the accumulated theory, principles, and lore of evaluation with Center staff.

*Evaluation considerations in planning.* — Evaluation considerations enter into the first and succeeding phases of planning a project or service. For example, each project begins with production of a description of its operating context (problematic area) which includes an analysis and assessment of deficiencies and wants, the problems underlying these, and a translation of these problems into program objectives. An evaluation perspective raises these kinds of questions: (1) Are the objectives clearly stated? (2) For each objective, if it were achieved, what would be acceptable evidences of achievement? (3) What strategies, operations, and materials would produce such evidences? The answers to such questions help in the development of plans.

For curriculum design and development projects evaluation is an internal problem and a necessary ele-

ment in output. Project staff consider questions such as the following in planning evaluation materials: (1) What evidences are necessary for making judgments about the results of inquiry in the discipline or disciplines involved? (2) In what set of terms or symbols is evidence expressed? (3) What are the procedures for gathering evidences? (4) In what ways are variations in the qualities of evidence expressed? (5) What are the procedures for using evidences to arrive at determinations of quality? What are the standards of judgment? How are justified judgments shared?

Statements of objectives are considered statements of the attainable, of intended outcomes or tasks, not of ideals or purposes. Determination and statement of objectives rank high in demands on thought and energy of staff.

Planners are encouraged but not required to specify objectives of curriculum projects in operational statements expressed in behavioral terms. Behavioral terminology perhaps more often obscures than clarifies curriculum objectives inasmuch as pervasive terms such as "understanding," "meaning," "cognitive," "affective," "learning," have elusive meanings. Vast compendia of behavioral goals or outcomes produced by educators have been found unwieldy and generally unusable. Relatively trivial but readily definable objectives may be given more attention than objectives which are intrinsically more important but highly resistive to precise behavioral definition. Outcomes specified as tasks, problem solutions, or task solutions are certainly acceptable. At least the "behavior" involved is structured by the tasks, and it can be reasonably argued that it is behavior in relation to the defining tasks that provides evidence of achievement of objectives.

Under the theory of practice of a liberal curriculum, the decision to plan a curriculum in a discipline or field of study, e.g., in mathematics, is in effect a selection of the objectives and the criteria for judging the legitimacy of objective statements. The objectives and the criteria come with the evolving conceptual structure of mathematics and the methods of inquiry and standards of truth which produce that evolving structure. To attribute objectives to the mathematics curriculum such as "to be a good consumer," "to be a defender of the American way," or "to live intelligently," even if behavioral statements of these were possible, is not a useful activity. The disciplines of knowledge in particular are what they are and not what schoolmen may want them to be. As systems of inquiry, they are open-ended. They cannot guarantee "proper" human conduct. No study can be expected automatically to produce adherents, appreciators, or true believers, even with behavioral statements of objectives towards those ends.

Project planners are expected to develop a variety of evaluation procedures and instruments as an integral part of curriculum development: product evaluation schemes, performance tests, observation schedules, rating scales, and achievement tests which are designed to test the ability to learn new material presupposing the prior learning of old materials.

Project planners have to develop standards for judgment of feedback which account for such properties of materials as learnability, clarity, difficulty level, approach, sequence, organization, feasibility in the classroom setting, students' and teachers' attitudes toward the material, and suggestions for improvement.

### Universal Plan for Evaluation of Center Operations

While the purposes and objectives of some of the subsystems, e.g., a curriculum project in a particular discipline or field of study, will require adaptations in any universal plan of evaluation, such a plan is still necessary and useful for the Center. A plan of evaluation is a plan for an operation or process which has the purpose of acquiring and providing information for decision-making.

*Rationale.* — The first stage of the plan of evaluation is the development of a rationale. The rationale has four parts (see Fig. 1). It requires a written statement of the model(s) of the evaluation process (the judgment-justifying process) from the disciplines or other sources appropriate to the project or service to be evaluated. The statement must include the nature of evidence, the acts of judging evidences, and the standards for justifying judgments. The rationale further requires an analysis of the decision-making groups to be served. (What are the groups and what kinds of evidences do they require?) It requires the development of the relevance of the evaluation model(s) to the decision-making group(s). (Will all decision-groups involved be served by the model? If not, what additions to the model are required? Upon what are these additions based?) It requires a statement of the general phases of the plan of operation of the system or subsystem (project or service) which is to be evaluated. The plan phases for the curriculum design and development projects have come from the systems approach to curriculum practice and the theory of practice of a liberal curriculum. The plan phases of management or services operation have come from systems management notions. A writ-

ten statement harmonizing the four considerations is required for each subsystem. Figure 1 is a diagrammatic representation of the rationale.

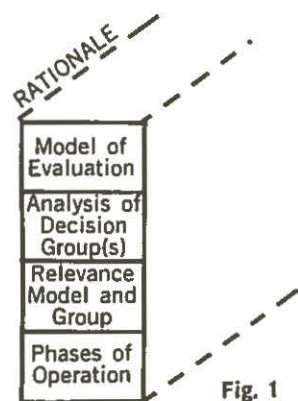


Fig. 1

*Description of judgment.* — The second stage of the plan of evaluation is the development of a comprehensive description of the acts and standards of judgments for all phases of operations of the project or service set forth in the rationale (see Fig. 2). Five categories of descriptions are required. For each phase of operation the corresponding range of standards of judgment is described. Next, the relationships of logical dependency among the standards for phases 1 through phase  $n$  are set forth. Then for each phase of operation, the range of judging acts must be described. Then the relationships of logical dependency among the judging acts for phases 1 through  $n$  are set forth. Finally, a description of the logical relationships between standards and acts in each phase is developed. At this point, then, there is available an explicit judgment scheme and its collected data for a subsystem (project or service) and its relevant decision-making groups. Figure 2 illustrates this stage.

*Description of plans.* — The third stage is the development of a comprehensive description of the particular plan of operation for the subsystem (project or service). Five kinds of descriptive evidences are re-

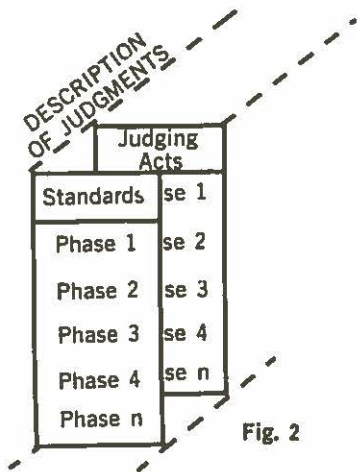


Fig. 2

quired for this task (see Fig. 3). First, a statement is required of the phases of the plan of operation beginning with initial assessments of the context and determination of objectives, and finishing with the completion of the product or recycling of the service. Second, beginning with the initial phase, the logical dependencies of each succeeding phase are set forth. Third, systematic observations of each of the phases in operation are carried out. Descriptions of the evidences collected and the methods of collection are developed. Fourth, the empirical dependencies between observed initial and succeeding phases are described. Finally, the observed congruencies between the phases planned and the phases observed are set

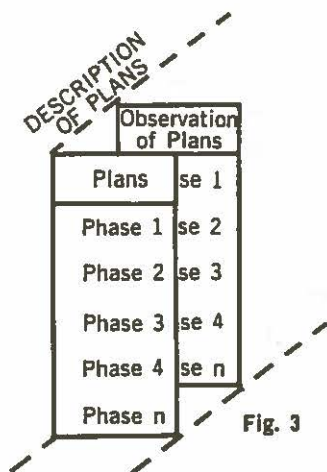


Fig. 3

forth. Figure 3 presents this stage diagrammatically.

The rationale defines the evidences to be collected. The descriptions of evidences — standards, acts of judgment, plans, and observations of plans in operation — provide the substance upon which evaluation is based.

*Justification of judgment.* — The fourth stage in the plan is the actual judging of the system or subsystem (see Fig. 4). This evaluation is the justification of the choice of specific standards and judging acts and their application to the evidences planned for and the evidences observed, all in relation to an evaluation model and a specific audience of decision-makers.

*Communication of judgment.* — The final step is the communication

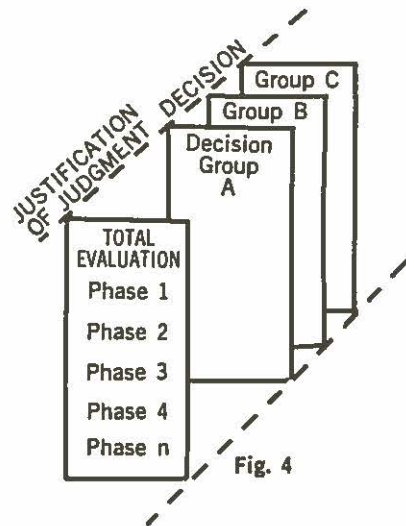


Fig. 4

of the justified judgments to the appropriate decision-making groups. Written reports are essential.

The entire plan of operation for evaluation is summarized in Figure 5.

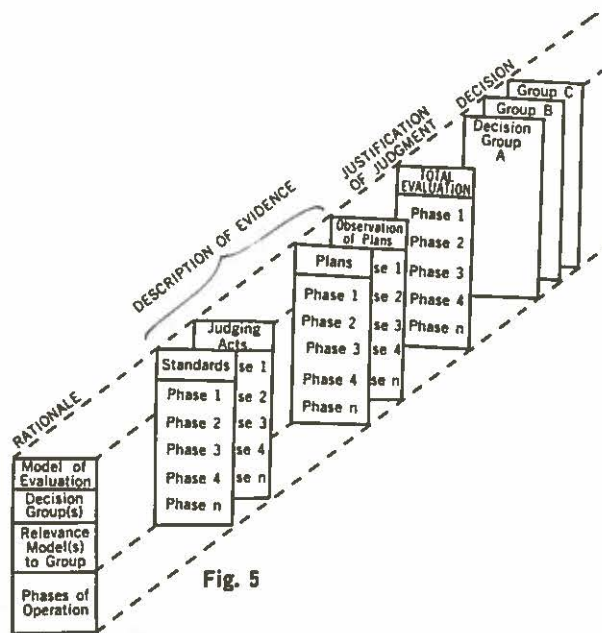


Fig. 5

Savard—continued from page 10 curriculum and instruction are so formidable that a special institutional effort in planning and development is necessary.

It was to perform this work that the Hawaii Curriculum Center was created as a joint activity of the Hawaii State Department of Educa-

tion and the University of Hawaii. It serves the State as the primary center for large-scale design and development in selected areas of the curriculum and for demonstration and evaluation of local, national, and international curricula.

The Department of Education contributes the full amount of its allot-



ment of federal funds under Title III of the Elementary and Secondary Education Act of 1965 and the services of top administrative personnel. It subsidizes the in-service training, dissemination activities, extra personnel, equipment, and materials needed for field location schools. Another important contribution is the participation of the districts and individual schools in the trial and evaluation of new curricula.

Community cultural organizations and professional societies collaborate on Center projects and activities where they share a common purpose.

With the general purpose of improving the instructional program in the schools, the Center operates to design, develop, demonstrate, evaluate, and assist in the dissemination of new courses in designated areas of the curriculum. Under the Title III mandate to the Center, the areas of English, foreign languages, and fine arts have been targeted for large-scale development. Thus the major project of the Center now is the planning, development, and testing of a comprehensive English language curriculum.

The courses eventually designed in a given area will give the optimum in 1) help and direction for teachers; 2) carefully designed materials of instruction; 3) provision for individualized instruction and independent study; 4) continuous evaluation of student progress; and 5) model equipment, library, and media collections in support of the new programs.

The Center performs another major function in the field trial and evaluation of courses developed elsewhere and the dissemination of results to the schools of the state. It carries on a continuing survey and analysis of significant trends and developments in curriculum, selects programs for exemplification in its Laboratory School classes, assesses

their efficacy and applicability to Hawaii, and maintains contact with other schools using the same programs.

What has been achieved in the Hawaii Curriculum Center is a unique mechanism *within* the educational system to organize for systematic change on a scale adequate to the need. The strength of the Center lies in a structure which bridges the University, the schools, and the community. Within this structure teachers, scholars, researchers, and artists can come together to plan and study, write, and experiment. Only within a framework that promotes this systematic collaboration can solutions be found to the persistent problems of education.

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proaches to the continuing problem of teacher reeducation are being sought, tried, and evaluated. In preparation for the dissemination work ahead, when the new curriculum will be tested on a statewide basis, eight teachers and curriculum specialists from the several districts have been brought to the Center for a year and two summers of study and practical experience in the project. The experience gathered in these various programs will form the basis for specific recommendations to the Department of Education and the University of Hawaii for future in-service programs in support of the new curriculum.

In the new English curriculum being formulated by the Center, certain characteristics will be evident of the theoretical framework it has adopted. There will be no age or grade structure, ability grouping, or tracking practices, no artificial barriers to progression, such as grade-level restrictions on books. Instead, the program will be conceived as a stream of study without end, with

provision for a high degree of individualization, independent study, and inquiry; students will work in this stream in accord with their performance. What will finally emerge from the English Project is a prototype instructional program in English, grounded in theory, articulated from kindergarten to grade 12, evaluated in laboratory and field trials, complete with tested plans for dissemination to the schools of Hawaii and for large-scale in-service programs. If present plans for staff and resources are realized, the entire development process — from theory to design to production to pilot testing in selected schools — should be completed in four years.

*King—continued from page 13*  
fessional relationships to understand and to learn to live with.

As a mechanism for educational development in the contemporary mode, the Hawaii Curriculum Center practices a comprehensive approach involving researchers, teachers, scholars, writers, designers, specialists in media, evaluation, and curriculum development, and educational administrators. This approach, plus its unique affiliation with the Department of Education, the University of Hawaii, the private and church-related schools, and the scientific and cultural agencies of the state, gives promise of high effectiveness in the task charged to it — the continuous regeneration of assigned segments of the instructional program of the schools of Hawaii.

<sup>1</sup>David L. Clark, "Educational Research and Development: The Next Decade," *Implications for Education of Prospective Changes in Society*, ed. Edgar L. Morphet and Charles O. Ryan. Reports prepared for the Second Area Conference of Designing Education for the Future: An Eight-State Project (Denver: Project Office, 1362 Lincoln St., 1967).

<sup>2</sup>Ralph W. Tyler, *Basic Principles of Curriculum and Instruction* (Chicago: The University of Chicago Press, 1950).