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ABSTRACT

This training guide for evaluating vocational rehabilitation programs and services is designed for use by state vocational rehabilitation agencies in developing a system for evaluating either their overall program or specific aspects of it. The manual first addresses itself to the rationale for program evaluation, and then examines the evaluation process from the definition of objectives through the selection of criteria. The design for program evaluation is discussed in view of research methodology and the selected focus of program research. After a detailed discussion of the nature and process of various forms of evaluative research, the issue of innovation is considered. The utilization of results obtained through program evaluation is considered in regard to the dynamics of organization and resistance to change. Recommendations for overcoming resistance, implementing program evaluation, and utilizing new information are provided. (SJL)

PROGRAM EVALUATION: A BEGINNING STATEMENT

TENTH INSTITUTE ON REHABILITATION SERVICES

DRAFT

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PROGRAM EVALUATION: A BEGINNING STATEMENT

A Report from the Study Group on Guidelines for Evaluating
Vocational Rehabilitation Programs and Services

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The materials in this publication do not necessarily represent the official views of the Rehabilitation Services Administration nor of State vocational rehabilitation agencies. They do, however, reflect an attempt by State vocational rehabilitation workers to explore a significant aspect of their programs in order to encourage evaluation and stimulate professional growth.

PREFACE

"He that publishes a book runs a great hazard," said Cervantes four centuries ago. "Would that my enemy would write a book," said another; probably a politician whose name is obscured by time.

Such aphorisms were once highly respected. But people are now writing books as fast as publishers will print them.

This prime study group was charged with the responsibility of developing "A Training Guide for Evaluating Vocational Rehabilitation Programs and Services." With this in mind, we have endeavored to produce a document that can be utilized by state vocational rehabilitation agencies in developing a system for evaluating either their overall program or specific aspects of it.

Therefore, at the risk of running a great hazard and/or subjecting ourselves to our enemies, we have taken on this important challenge. The document which follows represents the collected efforts of many people who devoted considerable time and energy to present a guideline which will be useful to those interested in developing a sound evaluation program in their agency.

We are all aware of the need for and the importance of evaluating performance. Evaluation can serve many purposes. It can help us understand what we are doing or not doing. It can help us bring about change or it can help us strengthen our present position. Needless to say, evaluation is a must if we are to properly fulfill our role in vocational rehabilitation of assisting the handicapped in finding their rightful place in society.

With these things and many others in mind, we have prepared the following document. It is, as its title states, a guide for further study, investigation, and development.

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CHAPTER I

PROGRAM EVALUATION: WHY DO IT?

Why do program evaluation?

Why is it important?

We live in an age of accountability. It has been said that the decade of the 60's was the decade of expansion and innovation in vocational rehabilitation, but that the decade of the 70's is the decade of accountability. Schools, businesses, and public-serving agencies have, in recent years, been put under more and more pressure to prove that what they're doing is worthwhile.

Rehabilitation is no different.

The day when legislatures were satisfied at appropriation time with figures on the numbers of clients served is fast disappearing. If you were asked to testify before a legislative appropriation subcommittee and were asked the question, "How well do you serve the clients you serve?" could you answer with any degree of accuracy? Think about it.

In addition, rehabilitation is rapidly moving into serving entirely new populations, with varied and diverse kinds of programs. Public Assistance recipients, drug addicts, alcoholics, are now within the purview of rehabilitation activities. Do all these programs work? How well do they work? What have we learned from trying to serve them? Can you answer these questions? Think about it.

Rehabilitation certainly is growing; all these new programs with different kinds of clients. But are there populations not served right now that need to be? We're almost in complete agreement that there are many needs not presently being served by rehabilitation. But what are they? How can we find out? Once discovered, how can we meet the needs? These are pressing questions that need to be answered. Think about it.

Federal and State administrators are constantly demanding accountability of us in terms of program functioning. For example, when we work with Public Assistance clients we must work toward decreasing dependency. How well are we doing? Our boss must know; he's accountable to somebody else, and he needs the answers too. Can we answer these kinds of very natural and understandable questions with any degree of accuracy? Think about it.

All the above questions, when addressed, have tremendous ramifications in terms of organizational development. Each and every one, for example, has a bearing on staff training. What kinds? How long? Who should be trained? Think about it.

These considerations, coupled with legal basis and authority established by the Amendments to the Vocational Rehabilitation Act, logically require a systematic plan for program evaluation to help the agency:

(1) To determine agency goals.
(2) To determine the effectiveness of agency service delivery.
(3) To better determine vocational rehabilitation program needs.
(4) To insure efficiency in program management.

Determining agency goals

Growth and expansion always create the necessity for the reassessment of goals and objectives. Service priorities continually shift with respect to changing economic patterns, geographic factors, and special disability groups. In order to more effectively plan and develop a service plan which addresses itself to these external changes, emphasis and practices must be systematically reevaluated.

It has been said that, "No data exists to show that vocational rehabilitation services are not dissipated on clients who could achieve employment goals without the high quality, expensive services offered." Whether this statement be true or not, its meaningfulness can only be interpreted in light of established program objectives. Is it a program objective to serve only clients who could not achieve employment goals without the "high quality, expensive services offered"? We can only determine effectiveness of service delivery by evaluating objectives.

Determining the effectiveness of agency service delivery

Vocational rehabilitation agencies exist for the purpose of delivering meaningful vocational rehabilitation services to disabled persons. Some operations researchers feel that specific factors exist that contribute to client success and failure. Indeed,

if this be true, a method of effective program evaluation could serve to uncover strengths and weaknesses,either internal or external, that may be corrected or circumvented.

Perhaps one of the greatest expenditures which confronts vocational rehabilitation agencies is the purchase of training services from vendors. It is important that these services be evaluated to determine how adequately they meet client employment needs.

Vocational rehabilitation services vary according to area and regional differences. It is reasonable to assume that the Black Lung disease is more pronounced in coal mining areas than in the coastal plain. Evaluation in order to establish local, area-wide, or regional priority levels is then necessary, if vocational rehabilitation agencies are to effectively address themselves to peculiar population needs.

Determining vocational rehabilitation program needs

The location and identification of service gaps is one of the greatest missions of an effective evaluation unit. The identification of such gaps serves to determine overall staff training needs, necessary program changes, and the justification or knowledge of necessary personnel needs.

The assessment and evaluation of a local community's need, ability, and willingness to plan for and develop community resources may often be the key to facilitating agency services. Evaluation units can be valuable assets in identifying areas of services that could be complemented by such resources.

Insuring efficiency in program management

Efficient management techniques must be practiced if the vocational rehabilitation program is to assure itself that the most people possible receive the best quality service within given financial means. Effective management practices must be a goal of all service agencies if efficiency is to be realized. Costs, organizational patterns that provide for expedient services, and personnel assignments can be critical factors in providing effective services to the disabled. Standardized accounting procedures may vary little from agency to agency, but cost-analysis can present important information for decision makers. A systematic evaluation of agency management and fiscal practices not only serves to enhance public confidence, but allows program administrators the opportunity to realistically determine the level of efficiency with which their program operates.

Levels of involvement

In a typical rehabilitation service system, several levels can be distinguished:

(1) Social and Rehabilitation Service (SRS) – concerned with alternative social service strategies, allocation among rehabilitation and other programs and needs.

(2) Rehabilitation Services Administration (RSA) – concerned with broad policy goals, and needs of total state programs.

(3) State Vocational Rehabilitation Agencies – concerned with delivery of services in the aggregate to meet the needs of clients and the desire of the community for rehabilitation; obtaining more state funds and matching funds from the Federal government and using them well; and planning and evaluation.

  (a) Regions – concerned with balancing money and personnel resources among functional subdivisions (districts).

  (b) Districts – concerned with actual service delivery to clients in localized areas.

  (c) Supervisors – concerned with control of quality and quantity of services delivered by counselors.

  (d) Counselors – concerned with needs of clients, requirements of superiors; directly responsible for casework.

  (e) Clients – final recipients of services; contact with system usually confined to district office and below.

In descending the levels in the system, from SRS to clients, concerns become less and less global, and more and more microscopic. The types of evaluation and the criteria selected might also vary at the different levels where evaluation might take place. It is the responsibility of the evaluator to determine precisely whom he is to serve, and what types of evaluation might apply to that level in the hierarchy.

Cutting across these levels are other programs. These additional perspectives should be noted, although evaluation of these programs is done according to state agency objectives. These are:

(1) Other public agencies – such as those represented by rehabilitation programs which serve welfare recipients, trust fund recipients or other specially funded projects.

(2) Public governing bodies sponsoring jointly funded rehabilitation projects such as a county school district or a county alcoholism clinic.

(3) Private community agencies or vendors of rehabilitation services, such as workshops.

The next group of items are specific problems which have been identified in rehabilitation programs as requiring evaluation and analysis The list could readily be extended. We have included it to stimulate further discussion by state agency administrators and staff of the needs for evaluation. What other problems would you add to the list as needing attention? What problems should receive priority?

SUMMARY

Why Do It?

(1) To assess and evaluate the agency's current situation and set future goals and priorities.
(2) To locate gaps in service.
(3) To evaluate counselor and other staff performances.
(4) To determine future objectives.
(5) For cost analysis.
(6) To make better staff assignments.
(7) To determine and evaluate training needs.
(8) To determine if established and/or projected goals are being achieved.
(9) To justify quality of agency performance.
(10) For public relations values, justifying budgets, etc.
(11) To modify and/or improve existing organizational structure.
(12) To determine and justify personnel and budgetary needs.
(13) To determine facility and other program needs.
(14) To eliminate weak and/or unnecessary program activities.
(15) To evaluate and strengthen relationships with other rehabilitation and vendor facilities.
(16) To isolate success and failure factors in client service programs.
(17) To isolate and evaluate service programs for priority target populations.
(18) To evaluate personnel practices in terms of recruitment and job assignments.
(19) To evaluate the quality of service by vendors.
(20) To justify the elimination or continued use of various categories of vendors.
(21) To evaluate the implementation of Title VI requirements as an integral part of quality case service (Civil Rights Act).
(22) To determine the need for changing and/or improving training programs and/or providing additional training opportunities.
(23) To isolate positive and negative factors in agency operations.
(24) To provide for greater staff input in establishing agency goals and objectives.
(25) To provide for client and other citizen participation and input.

Types of questions that invite evaluation

(1) Is the current general mix of rehabilitation services under the Federal-State program, in sum, helping the disabled person? Does he actually benefit from this help, or is he likely to be just as successfully rehabilitated if he never gets to the Vocational Rehabilitation program? What are the personal and program elements responsible for these outcomes?

(2) Within the current general mix of rehabilitation services, which services or which mix seems to be the critical one in a successful rehabilitation – generally, by disability group, and in interaction with other relevant client characteristics?

(3) What has happened in Vocational Rehabilitation's rare efforts to move towards decentralization of State programs? What are the factors that led the few efforts to abort? Why has Vocational Rehabilitation been slow to move in this direction?

(4) What has happened to Vocational Rehabilitation's efforts to take its individualized service model and adapt it to other groups?

(5) What has happened under the extended evaluation authority? Have its use and results suggested the need for altering our basic authority under section 2 or the need for altering the extended evaluation authority?

(6) How effectively are the State programs being administered in terms of:
   (a) administration (including planning, operations, and financial management),
   (b) eligibility determination, and
   (c) choice of vocational objectives for the disabled (including level and stability of employment)?

(7) How effective and balanced is the Vocational Rehabilitation program in its efforts to rehabilitate the various groups of disabled who are receiving public support; e.g.. public assistance recipients, social security disability recipients, and institutional populations of the mentally ill and mentally retarded?

(8) Is Vocational Rehabilitation making increased effort to rehabilitate persons with progressive disabilities such as multiple sclerosis? Have we restricted our approach or are we ready to move more actively into these disability groups? What are the relevant factors to be taken into account in deciding to move ahead?

(9) What stretch of interpretation of behavioral disorder as a mental disability is necessary in order to make the disadvantaged eligible for Vocational Rehabilitation? What have we done or learned from past efforts in this regard?

(10) What success has Vocational Rehabilitation had in the last decade with selective individualized placement of the disabled in:
- (a) self-employment (including homebound),
- (b) sheltered employment, and
- (c) small business enterprise?

(11) What kinds of disabled people are the Vocational Rehabilitation programs:
- (a) rejecting from referral, and
- (b) closing as not rehabilitated?

(12) Why must the Vocational Rehabilitation program serve three persons for every rehabilitation? Could this proportion be reduced?

(13) What are the factors that keep Vocational Rehabilitation from working effectively at the local level with the public assistance and employment services?

(14) What are the special problems of the aged mentally retarded? What specialized services are needed by this group? What should be the role of generic agencies in providing services to the aged mentally retarded?

(15) How are mental retardation facilities utilized? How can they be better utilized? How is space used in off-hours? What is the best location for mental retardation facilities?

(16) What are optional staffing patterns for mental retardation facilities? How do staffing patterns relate to community needs, cost, and other variables?

(17) What kinds of simple objective methods can be developed to assist staff to make self-evaluation directed toward constructive remedial action?

(18) How can research utilization in the field of mental retardation be improved? How can dissemination of information on mental retardation program needs be improved?

(19) What are the effects of early intervention on programs for the mentally retarded in terms of reduced costs and utilization of other resources for vocational training in later life?

(20) What is the feasibility of moving toward program planning within a State utilizing designated geographic service planning units to determine Vocational Rehabilitation service needs and the availability of public and private Vocational Rehabilitation sector resources to meet those needs?

(21) What should be the role of advocacy for Vocational Rehabilitation in arranging for and/or providing, when necessary, rehabilitation services for handicapped individuals as distinguished from Vocational Rehabilitation services for disabled?

(22) How can utilization of rehabilitation facilities be improved and increased?

(23) What changes in staffing patterns and programming are necessary for workshops to improve services for the disadvantaged?

(24) Within states, what are the patterns of service delivery penetration by geographical areas, and what area characteristics are related to high or low penetration?

(25) In states which are effective in terms of rehabilitation per 100,000 population, per counselor, cost per rehabilitation, etc., what is the quality of service provided? Also, what administrative and procedural characteristics prevail?

(26) To most efficiently allocate case service funds for states, what should be the mix of disabilities treated?

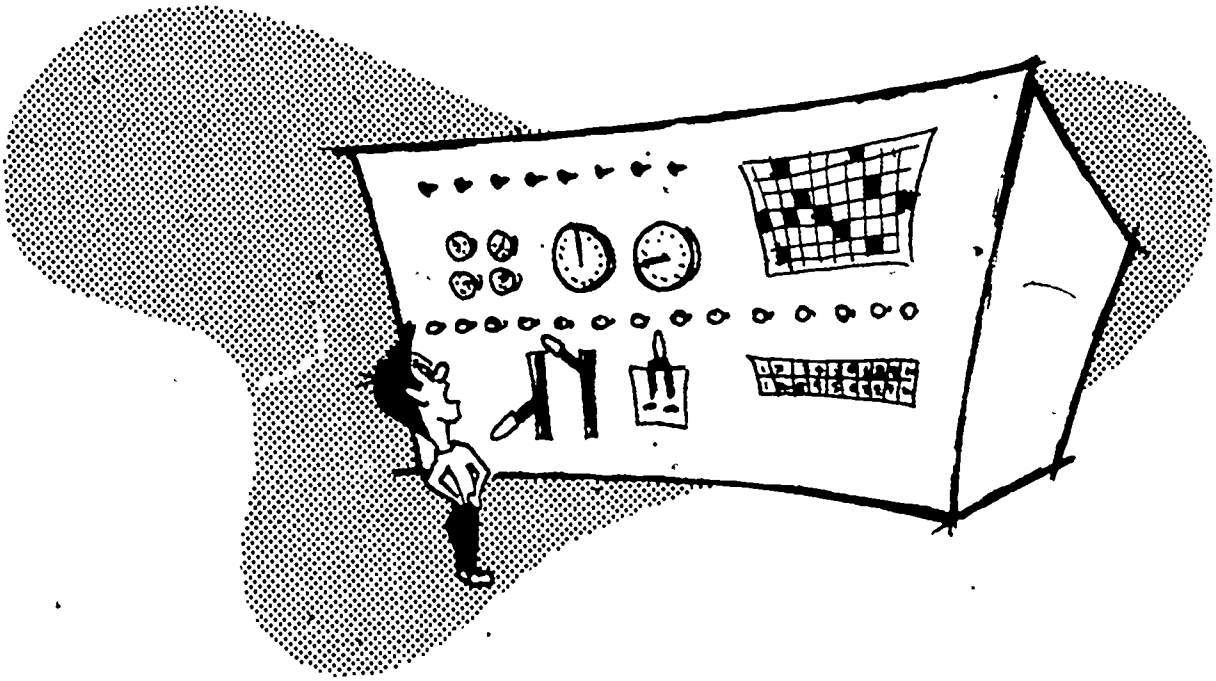
(27) What actually is the role of the rehabilitation counselor? Is there a more appropriate role to be played?

(28) How can workshops increase the flow of sub-contracts which are their main source of income?

(29) Is it possible to develop quantifiable measures of effectiveness and appropriate scales for gauging progress toward "Management by Objective" goals?

CHAPTER II

PROGRAM EVALUATION: ITS NATURE



Finding out whether or not things work, and how to make things work better – that's what program evaluation is all about.

The activity of finding out whether or not things work is the point of departure for the program evaluation process. But, it is an activity which is poorly understood.

Much of this chapter will focus on explaining and justifying this activity.

This activity is not the sole charge of the evaluator, however. The program evaluation process and, thus, the evaluator must intrude upon many other activities and functions which are critical to the life of a rehabilitation agency. Setting goals and targets, planning, program management, monitoring and review, policy and program reassessment, executive decision-making, and decision-implementation. The evaluator does not have exclusive authority or even prime responsibility for any of these functions. Rather, the role of the evaluator is to act as a stimulator, as a catalyst, as a change agent in the organization, helping to see that each of the above functions are carried out in such a way as to improve the effectiveness of the program. The program evaluator will often find himself acting not only as an evaluator, but also as a participant in program planning and even policy formulation. As the evaluator plays these many roles, he must be careful to keep each role clearly distinct in his own mind and in the perception of others.

Let us first focus on the activity of finding out. This finding out business can get pretty sticky.

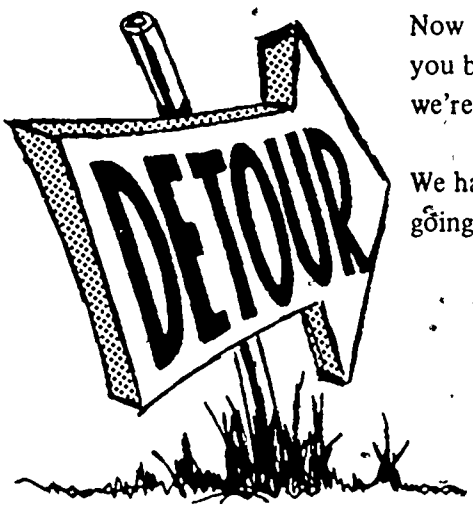
Enter Perry Mason -- or the problem of bias

The main gist to program evaluation is developing and sticking with certain rules of evidence. Rules of evidence is a term from the legal profession. There are all kinds of rules about what prosecution and defense can do in presenting evidence. Every time you hear Perry Mason up and say "Objection, your Honor," he's probably claiming that one of the rules of evidence is being violated. So his client isn't getting a fair shake. Of course, it's up to the judge to decide whether Perry's claim is justified or not. The judge enforces the rules of evidence. He is there to make sure the game is played fair and square -- that bias is kept out of the proceedings.

The nature of program evaluation is little more than a collection of rules of evidence that allow you to conduct evaluation with the assurance that bias is kept out -- including your own.

A detour -- evaluation as an organizational function

But before we go ahead, there are a couple of things we'd like to bring out.



Now it might seem like a detour. But if you bear with us, we think you'll see what we're driving at.

We have two basic points to make before going into specifics:

(1) Program evaluation is an aspect of the Agency's total organizational functioning. Program evaluation is an organizational function.

(2) The extent to which program evaluation contributes to an Agency is influenced by how effectively the Agency functions as a total organization. Organizational functioning sets limits to program evaluation effectiveness.

Organizational effectiveness – what's that? John Gardner (October 1965 issue of Harper's) wrote an article titled, "How To Prevent Organizational Dry Rot." Gardner answers the question of what constitutes an effective organization. Gardner maintains "an effective organization is a self-renewing one."

How effective is your agency?

Like to know whether your organization is self-renewing or not? Gardner has five questions you can ask to find out.

Ask yourself:

(1) How effective is my Agency's program for recruiting and developing talent?

(2) How good an environment does my Agency provide for the individual employed?

(3) Does my Agency have built-in provisions for self-criticism?

(4) How flexible is the internal structure of my Agency?

(5) Does my Agency have means to combat the process by which people become prisoners of their procedures?

Them as has gets

Go back to that five-item quiz a minute. Look at questions 3 and 5. Do you see how program evaluation relates directly to these two issues? Program evaluation is both the built-in provision for self-criticism and a means by which organizations get out of being jailed by their procedures.

But there is something even more fundamental here. And, it's a little like a chicken and egg situation. Namely, self-renewing agencies are going to be the very ones most

likely to develop and actively support program evaluation. Conversely, agencies that are loath to self-criticism are most likely to be the ones to accept program evaluation results only when these results confirm existing sacred cows.

Agencies in need of program evaluation most get it least. As we said, it's like a chicken and egg situation. Unless you're innovation prone and open to self-criticism, you're not going to give anything other than lip service to program evaluation.

Them as has, gets!

Testing your agency's SAPE

We just said that everyone more or less has to at least come out in favor of program evaluation. SAPE stands for Serious About Program Evaluation. If you want to test your Agency's SAPE, ask yourself questions like:

(1) What percent of my Agency's budget is earmarked for program evaluation?

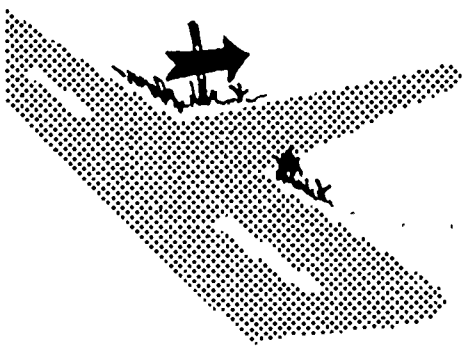
(2) What percent of the budget is spent on program evaluation? I made a distinction between what's budgeted and spent. Reason? Say you have a program evaluation unit with a budget of $60,000. But if the people with the program evaluation label are also the guys with a mess of other tasks (e.g., public relations, fiscal), then there's a whale of a difference between what an agency looks like it's spending and what is actually spent for program evaluation.

(3) How high up in my Agency's hierarchy is the program evaluation operation? As a rough rule of thumb, the higher an activity is located in the hierarchy, the more priority an agency gives to that activity. If Agency A has an Assistant State Director's position completely devoted to program evaluation, it suggests that Agency is more serious about program evaluation than Agency B which has program evaluation nestled off in fiscal or personnel.

Another thing – everything else being equal – isn't the Assistant Director more likely to get the ear of the State Director (and get him to pay attention to program evaluation results) than someone much further down the organizational ladder? So there's an additional reason for associating position in the hierarchy with SAPE.

(4) Is the program evaluation unit a valued (or desirable) opportunity within my Agency? Every organization – has to develop places where they can put people who have flubbed up in other more critical areas. If program evaluation is that type of unit within an agency, it suggests less SAPE. Why? Simple. It, by definition, is a "less critical area" than the units the guy flubbed up in. Also, word soon gets around that a "promotion" to program evaluation is a promotion into a dead-end street. Result? Your bright up-and-coming talent steers clear of program evaluation. This in turn leads to less competency in the program evaluation unit. A more tarnished image for program evaluation. And the snowball continues.

Turning the corner



Having made our detour, we'd now like to turn the corner and head back to the program evaluation process. We hope now that you see how things like an agency's capacity for self-renewal and its actual commitment to evaluation must be examined when you look at the nature of program evaluation. We hope, too, you see how program evaluation is an organizational activity and must lean on other organizational activities to be successful.

In short, even if your program evaluation unit is a top-notch one; even if evaluation efforts are as valid as they can be; when it's all said and done, program evaluation is as good as your agency lets it be.

Steps in evaluation process

We are now ready to get down to considering the nature of program evaluation in more detailed terms. Like we said at the outset, the nature of program evaluation is a little more than the following of a series of rules – rules of evidence. Adhering to these rules increases the chances that bias is kept out of the evaluation process.

Those who write about program evaluation (Hawkridge) refer to it as a logical, step-by-step process. These steps include.

(1) Spell out objectives for the program being evaluated.
(2) Select objectives to be evaluated and determine statistical analysis.
(3) Construct (or select) evaluation instruments.
(4) Select samples.
(5) Determine the points at which testing is to take place.
(6) Conduct statistical analysis.
(7) Develop conclusions and recommendations.

In the pages that follow, steps 1 through 4 will be treated individually. Steps 5 through 7 are condensed in a discussion of the framework for program evaluation.

Spell out program objectives

You might argue whether or not spelling out program objectives is really part of program evaluation. Often program evaluation can't proceed because the objectives of the program were never really spelled out in very clear terms. It's a little bit like going on a trip with no destination. If you don't have a destination, it's hard to know when you've arrived.

When we say "spell out," we mean that any program (or sub-program) needs to have an explicit statement in performance terms as to what that program is designed to accomplish. The key word in the sentence you just read is "performance terms." We distinguish program objectives in performance terms from program objectives couched in non-performance terms.

For example, the statement that a program goal is to rehabilitate the handicapped is a non-performance statement. Among the reasons that it is not a performance statement is that it contains no indication of what constitutes rehabilitation, nor what is meant by the handicapped. Also it lacks a quantitative measure. There are many other reasons why a statement such as the one we have just used is not a performance statement. In other words, even if we were to specify what we meant by rehabilitation (e g., one month continuous employment) and even if we spelled out eligibility requirements, we still would not have a satisfactory statement of program goals in performance terms.

We hope you are beginning to get the feel of what we are driving at when we use the term performance. Performance simply means what concrete, objective.

observable facts would have to be present for someone to conclude that program success has been achieved.

A good performance statement of program goals should really have two ingredients in it. First, it should have a statement as to the extent to which program goals must be achieved. Secondly, a statement of the limiting conditions (if any) that would qualify the evaluation of whether or not performance goals have been achieved.

Extent

The notion of extent usually carries with it a quantitative idea. For example, to improve on our statement of program goals, we might add a statement to the effect that the goal of Program X is to achieve continuous employment for one month with one thousand psychiatrically disabled clients. Maybe you can get a feel as to the increased precision that has brought about from the adding of this quantitative anticipation regarding the extent of program goals. Qualifications regarding extent can be carried on much more beyond the little example we have just used. Geographic distribution (e.g., state-wideness) is a commonly applied yardstick having to do with the extent of program services and goals.

Limiting conditions

So far we've only talked about extent. We haven't said anything about the notion of limiting conditions. Limiting conditions, as the term suggests, has to do with any significant qualifications whose presence or absence is expected to have a marked effect on program evaluation.

As an example of limiting conditions (and continuing with the example we've been using), let's talk about prior employment history. It is widely recognized that the chances of rehabilitation go up if – prior to disablement – an individual has had a stable work history. The same holds true for psychiatric patients. So in the statement of goals regarding (say) a special project designed to rehabilitate psychiatric patients, a statement regarding the allowable number of patients (so to speak) with good versus poor pre-morbid work history might be highly relevant to evaluating program effectiveness.

Another example of a limiting condition might be the nature of the employment activity into which a client is closed. Most rehabilitation practitioners would concede that the rehabilitation of one thousand males into competitive remunerative

employment would probably represent a more stringent criterion of program success than the rehabilitation of one thousand homemakers. So a good statement of program objectives will include all relevant conditions that bear on evaluation of program outcomes.

This sounds like a rather tedious task, doesn't it? The reason it sounds like it's a tedious task is that it is! The writing of program objectives in good, solid performance terms is a taxing job. It would not be surprising (for example) that a detailed statement of a state agency's performance goals for a fiscal year might consume several pages.

As suggested before, you might question whether or not this is really a program evaluation function. And if pressed, we might have to agree with you. But the idea is this. Program evaluation can only start after specified program goals have been arrived at. And everything else being equal, program evaluation will be a lot easier when the goals of the program have been clearly set forth in concrete performance terms. But when we get into the business of goal-setting, lo and behold we find ourselves back into the whole business of management, administration and - you guessed it -- organizational development.

A well-developed organization is one with clearly defined goals - goals that have been arrived at as a result of participation by significant elements in the rehabilitation community.

In a real sense, then, program evaluation can't tell you what your goals should be. It can only tell you whether or not you've reached the goals you said you were going to reach. And it can only do this if you came to program evaluation with clearly stated performance goals.

The example that comes into mind here is the statement of President Kennedy in 1960 that a goal for the United States would be to have a man on the moon in ten years. Now you can debate whether or not that was a good goal or a bad goal. But it was a clearly-stated performance goal. And the nature of the goal was such that you didn't need a very high-powered evaluation effort to figure out whether or not the goal was achieved. Either an American wound up on the moon in ten years or he didn't. It was that simple. But the point is that the evaluation of whether or not the man-on-the-moon goal was achieved can only begin after the goal was explicitly set forth.

Each participant in the rehabilitation process - S.R.S., R.S.A., State Directors, fiscal chiefs, directors of field operations, training and staff development specialists,

district administrators, supervisors, counselors, clients has needs, values and objectives which may be somewhat unique and which may conflict. When values conflict there are likely to be problems in choosing criteria by which a program should be judged. The program may be judged desirable by one set of values and criteria but undesirable by another set of values and criteria. Or, value differences may result in different interpretation of a problem. For example, the counselor may see a client's major problem as motivational while the client sees it as situational. Or, administrators may ascribe program weaknesses to failings on the part of individuals, while others may interpret the same weaknesses as structural.

Often objectives will be ambiguous such as to: "improve quality of life," "achieve vocational rehabilitation," "achieve self-sufficiency or maximum potential." Objectives must then be sharpened and distinctions made between ultimate and immediate goals. The evaluator becomes the catalyst for prompting administrators or line staff to more explicit goals. In this process, many levels in the agency may participate in defining goals. This participation helps to assure understanding of goals and acceptance of their legitimacy. For example, the values of counselors and administrators may appear to conflict. Counselors often insist that they are concerned with "quality" while their administrators are concerned with "numbers." Yet, a better definition of goals by both might reveal that no conflict really existed.

When evaluation is seen as a part of planning, the values upon which program objectives are based are a consequence of the judgments arrived at through program evaluation. In most instances, however, values are formed and goals set before a program is to be evaluated. It is in this latter case that the evaluator works closely with operating-level staff in assessing the current situation to identify concerns to be evaluated and to determine objectives and criteria. Every effort should be made to recognize that differences in values exist and the values reflected in the final selection of criteria should be explicit. In this way the choice of issues is relevant rather than arbitrary and the context within which criteria are selected is well understood.

So much for step one in the evaluation process.

Select objectives to be evaluated and determine statistical analysis

Let's assume now that you have gone ahead and developed a set of goals in clearly-defined performance terms. The next step is to select which of those goals you would like to measure. You might say, "Well, why not measure all of them?"

In some cases, it might be feasible to evaluate program effectiveness for all of the goals set forth. In other cases, it might be financially or practically not feasible to evaluate all goals all at once (e.g., limited program evaluation resources, limited time, etc.).

Once again, it is not the function of program evaluation (strictly speaking) to determine which of the goals should be selected for evaluation. This, like the first step (spelling out objectives), is largely a question of policy and as such, it's a question of values. Now, just because a person is a program evaluator he should not be barred from having any opinions as to what program goals ought to be and what ones ought to be evaluated. Our only point is that when a person is functioning in this way, he is not functioning as a program evaluator, he is functioning as a policy formulator. And the processes of policy formulation must be always kept sharply differentiated from issues of evaluation.

In selecting which performance objectives are going to be measured, an agency is likely to be influenced as much by external as by internal considerations. The development of national priorities (e.g., the disadvantaged) or the existence of peculiar local conditions (e.g., pneumoconiosis) might have as much to do with what aspects of program functioning will be evaluated as internal concerns and considerations.

Decisions about what should be evaluated are also influenced by anticipations about the likely outcome of the evaluation. For example, the consequences of a negative evaluation should be foreseen, particularly if this could result in the termination of the program. The need is for a contingency analysis: i.e., the process of plotting out the most probable instances of "what would happen if . . ." Here, the judgment of the evaluator and the sponsor of the evaluation plays a significant role.

The contingency analysis should include:

(1) an understanding of the entire program being evaluated
(2) delineation of the place of evaluation in the program.

The former suggests in what directions impacts might be felt and where program modifications might be instituted. The latter demands a statement of the purpose of the evaluation. It may be either "formative," assessing progress toward an objective or "summative," assessment of final achievement. Of course, evaluation is hardly meaningful without an eye toward the realities of implementation of findings. Possible program decisions might include some of the following:

(1) Expansion of the program

(a) the program is working optimally and current agency experience is anticipated as being a good predictor of what kinds of new clients will be served in an expansion.

(2) Termination of the program may be justified if –

(a) the program's goals have been achieved.
(b) public priorities determine that the program is of little merit relative to other felt needs.
(c) the costs of operation endanger other valued programs.
(d) no measurable or observable effects of program operation are in evidence.

(3) Continuation of the program (unchanged) may be based upon –

(a) indications of success in meeting objectives.
(b) overwhelming public support for popular programs based on emotional or humanitarian reasons.
(c) hope that improvements will eventually occur.

(4) Revision of the program may occur at almost all points in the evaluation process –

(a) new knowledge or capabilities might redefine the problem.
(b) legislation might be modified to change the direction or emphasis.
(c) a different use of resources (funds, facilities. personnel) might be proposed.
(d) different management techniques could change the administration of the program (Program Planning Budgeting System, Program Evaluation Review Technique).
(e) changes in the staff might affect program outcomes (number of staff, educational level, experience, assignment of responsibilities).
(f) different client groups might be served, or the way in which services are delivered might be changed.

In each of the above cases, it is necessary to establish and apply some form of criteria to the program's operation.

Construct (or select) evaluation instruments

The selection of evaluation instruments will be heavily influenced by whether the evaluation planning takes place before the fact or after the fact.

Too much of evaluation in rehabilitation takes place after the fact. By that we mean a special project or a new initiative of some type is undertaken and that little systematic thinking goes into evaluating the program in advance. No, it is much more common to have the program go on for some time and then to have questions raised regarding how well the program has been doing. This kind of hindsight evaluation has a couple of drawbacks associated with it. One of the biggest drawbacks is that of cost. Everything else being equal, it will cost more to evaluate adequately something that's already gone on rather than to plan evaluation from the outset. As simple a thing as the design of an efficient data collection instrument can make a whale of a difference when it comes to evaluating the results of a program. If we have to go to six different sources to collect the necessary six pieces of information on a particular client, it's going to cost considerably more than if we had planned from the outset and designed a little form that brought the information together.

Because of the increased costs of after-the-fact evaluation, it often happens that the validity of after-the-fact evaluation greatly suffers. For this reason, agencies ought to develop evaluation strategies in advance of what's going to be evaluated rather than after. In addition to decreasing cost and increasing validity, you can also accomplish a great deal more by going this route. For one thing, you can start a dialogue between your evaluation people and your service people in advance of the activity being evaluated. This will sometimes pay handsome dividends in terms of breaking down defensiveness and resistances between these two groups. If your service people have a chance to get together with your evaluation people before a project, they'll be more likely to see the evaluation in a less defensive light.

Conversely, if your program evaluation people interact extensively with your service people, chances are the instruments and procedures they devise will be more realistic than if they were operating without the benefit of such a review.

Speaking of instruments, an evaluation instrument can include everything from scores on psychological tests to changes in annual salary. The evaluation instrument can be very expensive (e.g., an hour-long, individual interview) or comparatively inexpensive (e.g., an item on the R-300). It's beyond the scope of this presentation to go into which evaluation instrument is going to be the best in a particular evaluation situation.

What can be stated is this. If you select your evaluation instruments in advance of the program, the chances are you're going to get far more efficient and far more meaningful results from your evaluation efforts.

Select Samples

Sampling can get pretty confusing to people who haven't recently taken a research course. There are all kinds of words running around about samples. You'll hear words like random samples, representative samples, stratified samples, stratified random samples, etc., etc. The basic concept behind a sample is really something that we're familiar with from day-to-day experiences. We all, at one time or another, have probably had a blood test. A blood test is a perfect illustration of the sampling idea.

Doctors take a tiny portion of our blood and – based on the analysis of that tiny portion – they are able to make almost fool-proof statements about the condition of the entire bloodstream. It's very important to keep in mind that when the lab finishes its work on the tiny vial of blood, the doctor doesn't hesitate to make statements about the condition of our entire blood system. The reason the doctor can be so bold is due to the fact that he can assume that whatever is present in our bloodstream distributes itself in a random fashion. Because of this randomness, the doctor is in a fashion able to say – "You've seen one vial of his blood, you've seen it all."

The doctor can make pretty strong conclusions based on a small amount of blood. So, too, if a large enough sample of clients is selected in a random fashion, then pretty definite conclusions can be drawn – not just about the sample selected, but about the total group from which the sample came. It's difficult to over-emphasize the importance of randomness in the drawing of samples. Because if you've got it, you're really in the driver's seat. By that is meant that the cost of doing evaluations can be considerably reduced. Instead of examining folders on a thousand clients who have gone through a program, we can draw a careful sample of one hundred of these clients and come up with results that are as certain as the results that would have been obtained from examining the whole thousand. While on the subject of samples, a few words should be said about control groups.

Control Groups

A control group is also a sample. Control groups are very seldom used in rehabilitation research and there are a couple of reasons for it. For one thing, if a control

group is to be a control group, it would have to be similar to the serviced group in every respect (e.g., age, sex, severity of disability, etc.) except one. That one respect would be that the control group didn't get the rehabilitation program that the serviced group got.

There is an understandable reluctance on the part of rehabilitation people to withhold services. At times also there might even be legal complications associated with such withholding of services.

But there are other times when objection to the withholding of services isn't really valid. Let's say someone has designed what he considers to be an improved work evaluation approach. But, he doesn't know whether or not it is in fact an improvement. To argue that this new technique should not be withheld from clients is to assume the very thing that ought to be proven Namely, is to assume that the new evaluation procedure is in fact an improvement.

We could go on and on with the topic of sampling For the moment, it suffices to say that the addition of a control group to program evaluation enormously enhances the strength of positive findings. By positive findings, we mean findings in support of the value of the rehabilitation effort. Let us give an extreme example to illustrate our point. If we claim we have the new magic wonder Elixir that will cure your cold every single time, you'd probably be pretty interested, wouldn't you? Let's call this ole' Grandpappy's magic cough elixir. Let us add that this elixir will absolutely cure your cold in two weeks from the time of application. Two weeks! Yes, you'd be perfectly right to reject this magic elixir since it really doesn't do more than what would have happened if you never had taken the elixir at all.

What's our point? Regardless of how sincere you think your particular magic elixir is, unless you have some built-in way of showing that it is an improvement over what would have happened anyhow, any proof that you have on an improved product might be open to considerable question. So regardless of how carefully we design a study and look at what the impact of the rehabilitation program is, our findings will always be a little short of being conclusive if we don't have a control group present to find out what would have happened if we had never devised a particular rehabilitation program at all.

Another way of looking at it is that control groups is a way of separating the Ole' Grandpappys from the Louie Pasteurs.

Now that we have seen an overview of the steps in an evaluation process, how do we actually go about evaluating an overall program? Whether we try to evaluate the overall rehabilitation program of a State agency, or whether we try simply to evaluate a particular project or subprogram within the overall State rehabilitation program, we need some guidelines or framework for thinking about programs in the context of evaluation. In the following sections we will try to present such a framework.

There is nothing simple or obvious about the selection of criteria. The evaluator must be aware of what is to be measured, what measurements are or might be available, and how strong the relationship is between the two. In the realm of social programs, especially, the effects to be measured may be difficult to quantify. No single criterion covers everything. The use of single criteria might distort evaluation. Thus, there is a need in rehabilitation for multiple criteria.

A major barrier in evaluation of rehabilitation activities is the lack of clear-cut criteria or excessive reliance on single criteria. The right questions must be asked in order to reach the right answers. Generally, there are different levels of objectives: Short-term, intermediate and long-term. These levels are related to the chain of assumptions which are thought to result in a long-term effect. For example, the objective of providing training to disabled persons is based on assumptions that training will lead to increased employability and to eventual improvement in income and employment. Specific output measures must be defined for each level of objective.

In vocational rehabilitation, for example, is a client "rehabilitated" when he is:

(a) Fully employed
(b) Fully employed in a job he was trained for
(c) Fully employed in a job he was qualified for
(d) Fully employed in a job he is satisfied in
(e) Fully employed in a job and capable of supporting himself and his dependents
(f) Partially employed
(g) Able to care for himself
(h) Psychologically well-adjusted to his disability
(i) Off the welfare rolls?

Also, how long must employment last – for six months – for 3-5 years when the taxpayers' investment will be repaid – or for the rest of his healthy working life? The task may be to measure qualities such as "happiness," or "well-being,"

but standard scales for such measurement are lacking. The evaluator must be explicit in his assumptions, interpretations, and manipulations of data in formulating criteria that purport to measure these qualities.

Types of criteria

There are several different types of criteria by which the success or failure of a program can be judged. Although there is no uniform set of criteria by which all programs are evaluated, it is useful to categorize criteria for evaluating rehabilitation programs.

(1) Client – Community impact

In addition to questions concerning client benefit, you can also ask questions about the success of a program in terms of very broad social goals. What amount of total need has been met? Have community attitudes been affected by the program?

(2) Program efficiency and effectiveness

(a) Efficiency assesses the relationship of program inputs to outputs. This type of evaluation depends more on relative measures than absolutes. Efficiency is judged by several kinds of performance criteria related to the cost of achieving an outcome and to the sequence of events that must occur to achieve the expected outcome. A distinction should be made between lower-level and higher-level efficiency criteria. Lower-level efficiency criteria deal with questions of use of time and resources, only in terms of input, such as case flow through time (measured by statistical analysis). Higher level efficiency questions concern both input and output variables, such as the program's net benefit to society or taxpayers, given all inputs and outputs (measured by cost-benefit analysis). Efficiency questions include: How are resources being used? How should the cost of services be shared? Can the same results be achieved with lower costs? How does the ratio of costs to benefits compare with alternatives, or standards? Has time been used

efficiently? Have the necessary events taken place to achieve the expected outcome? (case flow)

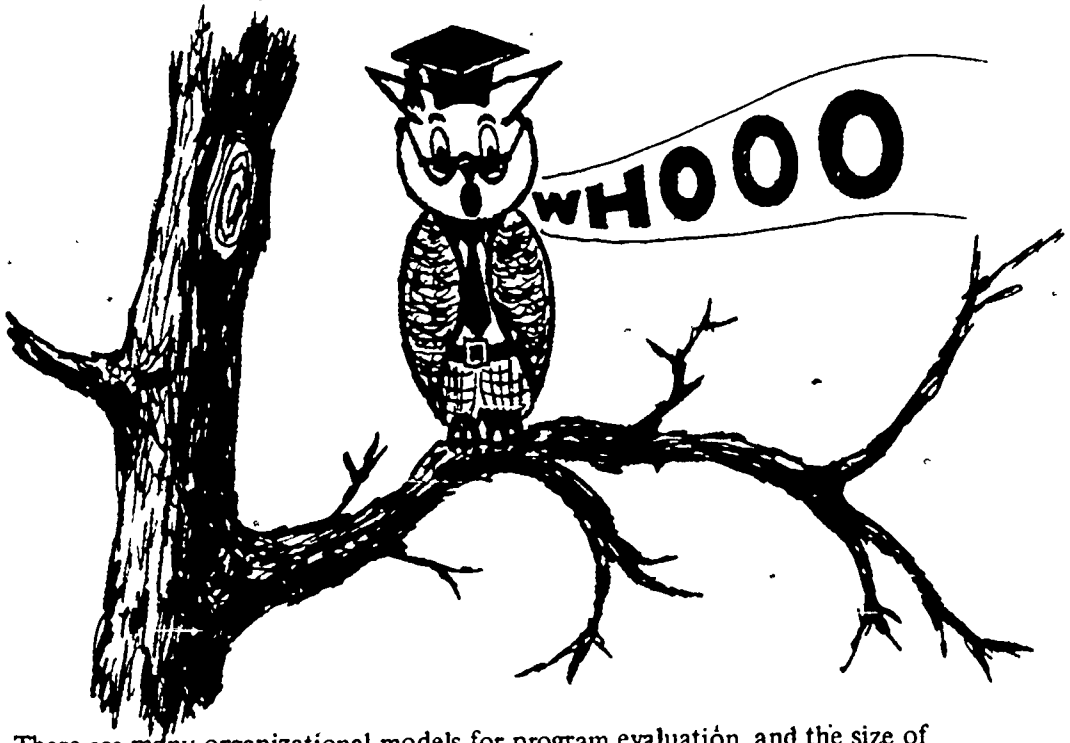
(b) Effectiveness – the criterion of success is the performance of a program as judged by predetermined expectations of effect. Here program output is measured by outcome or benefit criteria which must be based on a clear-cut statement of objectives. Effectiveness focuses on the output of the program. At issue is the performance of the program as judged by holding up the results to the expectations or objectives. Effectiveness issues are: What was the effect of program activities on outcome? What was the effect of other activities on outcome? Why did the program succeed or not succeed?

(3) Program management

The criterion of success here is the quantity and quality of program effort. This is an assessment of program input and program performance. Typical questions are: Is the program proceeding as expected? How does the program effort compare with local or national standards with respect to number of staff, money spent, staff assignments, amount of grants obtained, etc.? The emphasis is on the form of the program, rather than its functioning.

CHAPTER III

PROGRAM EVALUATION: WHOOO . . . IS TO DO IT?



There are many organizational models for program evaluation, and the size of the agency will dictate the organizational patterns of these units. This unit should be clearly defined in the State agency organizational structure. The Director of this unit should be at the highest staff level responsible on a direct line to the State Agency Director. The Evaluation Unit should have an independent assignment to measure and assess the realization of agency goals and should serve as the focal point for this activity.

The unit charged with program evaluation should be responsible for both program evaluation and program and policy analysis. It will observe current program operation, identify program strengths and weaknesses, and present alternative action plans which will provide program direction.

Generally, the staff in a Program Evaluation Unit should have professional expertise in several areas such as: State agency operations, evaluation and experimental design, data collection, fiscal and budget activities, statistical analysis, management, and economics. At least one member of the evaluation staff should have vocational rehabilitation field experience, preferably at the rehabilitation counselor level.

It would be advantageous if most evaluation staff members had vocational rehabilitation field experiences.

Staffing

It is possible to identify certain staff functions which relate to program evaluation. Some of these are:

(1) Director or Coordinator of Program Evaluation.
(2) Researcher.
(3) Technicians in evaluation, measurement, data processing, budget and fiscal operations, report writing and statistics.
(4) Support staff.

It is desirable, and may be necessary in small units that the staff members in an evaluation unit have skills in more than one of the above areas.

Other resources available to evaluation units

Consumer participation is a vital resource to vocational rehabilitation program evaluation. Consumers should be involved in identifying unmet needs; in providing a measure of consumer satisfaction, in measuring effectiveness of services; and can impact program direction. Consumers of vocational rehabilitation services include, among others, referral source representatives, clients and employers.

Persons with specific skills or expertise not available in program evaluation units can be utilized as consultants. Consultants can come from outside the agency or from within. Outside consultants usually may be more objective about specific evaluation activities.

A consultant from within the agency can offer certain specific advantages since he is thoroughly familiar with the program and he has clearly established lines of communication within the agency. In addition, program evaluation is most relevant when it builds upon and involves the people directly affected.

State agencies need to develop the ability to respond to and take advantage of data generated by other levels of evaluation. The States must identify their roles in program evaluation and be responsive to the issues arising from evaluation results. It is suggested that the Federal level be encouraged to assist States by:

(1) Providing funds to assist States in the costs of setting up a program evaluation unit.

(2) Making available the resources and funds to provide training to program evaluation staff in the States.

(3) Establishing demonstration programs where common evaluation designs and models can be developed for use by States.

CHAPTER IV

PROGRAM EVALUATION: WHAT IS DONE – DESIGN

To handle the increasing variety and complexity of vocational rehabilitation program problems, many evaluative techniques developed by industry and educational institutions are worthy of mention. Each evaluative technique has its special use, and care must be taken to select the correct technique for a particular evaluation activity. The agency director as well as the evaluator has a role to play in selecting the technique for evaluating program activities, and the better he understands the range of evaluative possibilities, the more likely it is that the vocational rehabilitation program evaluation will bear fruit.

The selection of a method of evaluation depends on many factors, the activity to be evaluated, the relevance and availability of historical data, the degree of potential accuracy, the time period to be evaluated, the cost/benefit (or value) of the evaluation to the agency and program, and the time available for making the evaluation cycle.

These factors must be weighed constantly, and on a variety of levels. In general, the evaluator should choose a technique that makes the best use of available resources and data. If he can readily apply one evaluative technique of acceptable accuracy, he should not try to "over-kill" by using a more complicated and advanced technique that offers potentially greater accuracy, but that requires nonexistent or difficult to acquire information or information that is costly to obtain.

The main purpose of this chapter is to present an overview of the way a vocational rehabilitation agency may approach an evaluation activity, and explain how to match an evaluation method to a program activity.

The subsequent charts present several examples of techniques used in program evaluation. The charts are by no means complete and exhaustive, but they do provide a body of basic information about the different kinds of evaluative techniques. Some of the techniques charted are not in reality a single or complete method of evaluating program or agency activity. They are to be interpreted as descriptive of the basic concept of each technique.

A. Qualitative methods

Evaluation Technique	1. Delphi method	2. Program research and inquiry	3. Panel concensus and consultants	4. Visionary evaluation	5. Historical and statistical analogy
Description	A panel of experts is interrogated by a sequence of questionnaires in which the responses to one questionnaire are used to produce the next questionnaire. Any set of information available to some experts and not others is thus passed on to the others, enabling all the experts to have access to all the information for forecasting. This technique eliminates the bandwagon effect of majority opinion	The systematic formal, and conscious procedure for evolving and testing hypotheses about agency and program activity.	This technique is based on the assumption that several experts can arrive at a better evaluation than one person. There is no secrecy, and communication is encouraged. The evaluations are sometimes influenced by social factors, and may not reflect a true concensus.	A prediction that uses personal insights, judgment, and when possible, facts about different outlines of the future. It is characterized by subjective guesswork and imagination, in general, the methods are non-scientific.	This is a comparative analysis of the introduction and growth of similar new programs, that bases the forecast on similarity patterns.
Accuracy	Fair to very good	Excellent	Poor to fair	Poor	Good to fair
Identification of turning points - predicting significant change in program activity	Fair to good	Fair to very good	Poor to fair	Poor	Poor to fair
Typical applications	Evaluation of long-range and new program activity.	Evaluation of long-range and new program activity.	Evaluation of long-range and new program activity.	Evaluation of long-range and new program activity.	Forecasts of long-range and new program activity.
Data required	A coordinator issues the sequence of questionnaires, editing and consolidating the responses.	As a minimum two sets of reports over time. One needs a collection of program data from questionnaires, surveys and time series analyses of program variables.			
Is evaluation possible without computer?	Yes	Yes, but costly and cumbersome.	Yes	Yes	Yes
Time required to develop an application and make an evaluation	2 months	3 months	2 weeks	1 week	1 month

	A. Qualitative methods (continued)		B. Time Series Analysis and Projection	C. Causal methods	
Evaluation Technique	6. Field experiments	7. Experiment model	1. Moving average	1. Regression model	2. Intention to use & information, anticipation and satisfaction surveys
Description	These are two research designs for testing the relationship between experimental and dependent variable in a natural setting of ongoing programs.	Usually consist of two randomly selected equivalent control and experiment groups. A "before" and "after" measure is made of both and comparisons made.	Each point of a moving average of a time series is the arithmetic or weighted average of a number of consecutive points of the series, where the number of data points is chosen so that the effects of program irregularity are eliminated.	This functionally relates programs to other internal variables and estimates an equation using the least-squares technique. Relationships are primarily analyzed statistically, although any relationship should be selected for testing on a rational ground.	These surveys of the general public (a) determine intentions to use services of (b) derive an index that measures general feeling about the present and the future and estimates how this feeling will affect demand for services. These approaches to evaluations are more useful for tracking and warning than evaluating, the basic problem in using them is that a turning point may be signaled incorrectly (and hence never occur).
Accuracy	Good to very good	Poor to fair	Poor to good	Good to very good	Good
Identification of turning points - predicting significant change in program activity	Poor	Poor	Poor	Very good	Good
Typical applications	Useful in testing new methods in a natural setting.	In rehabilitation it is rarely possible to obtain equivalent control groups and the model is not usually applicable to Vocational Rehabilitation.	Program activity and monitoring.	Evaluates agency activity by programs.	Evaluates demand for services.
Data required	Requires careful planning and understanding of controlling variables in the Human sphere of activity.	Drawing a representative sample and defining the model are prerequisites.	A minimum of two years of program data. (Of course, the more history the better.) The moving average must be specified.	Several years' quarterly history to obtain good, meaningful relationships. Mathematically necessary to have two or more observations than there are independent variables.	Several years' data are usually required to relate such indexes to program activity.
Is evaluation possible without computer?	Yes, but costly and cumbersome.	Yes, but costly and cumbersome.	Yes, but costly and cumbersome.	No	Yes, but costly and cumbersome.
Time required to develop an application and make an evaluation.	2 months	2 months	1 day	Once data are available.	Several weeks

C. Causal methods (continued)

Evaluation Technique	3. Input-output model Evaluation of case flow	4. Diffusion index	5. Leading indicator	6. Life-cycle analysis	7. Revelation evaluation
Description	A method of analysis which relates change in case flow to characteristics of that stage of the process. Considerable effort must be expended to use these models properly, and additional detail, not normally available, must be obtained if they are to be applied to specific programs.	The percentage of a group of program activity indicators that are going up or down, this percentage then becoming the index.	A time series of a program activity whose movement in a given direction precedes the movement of some other time series in the same direction is a leading indicator	This is an analysis and evaluation of new program activity growth rates based on S-curves. The phases of activity acceptance by the various groups such as innovators, early adapters, early majority, and laggards are central to the analysis	This is an evaluation of program activity by perceiving intuitively and disclosing an enlightened or astonishing truth. "I feel it in my bones evaluation."
Accuracy	Good to very good	Poor to good	Poor to good	Poor to good	Poor
Identification of turning points - predicting significant change in program activity	Good	Good	Good	Poor to good	Poor
Typical applications	Evaluation of program activity.	Evaluation of consumer and client demand for services.	Evaluation of program activity and activity revealing program imbalance.	Evaluates new program activity.	May be used in all aspects of program evaluation.
Data required	Ten or fifteen years' history. Considerable amounts of information on client activity flow within a program for each year for which an input-output analysis is desired.	Several years' data are usually required to relate to such indexes.	The same as an intention to use survey + 5 to 10 years of history.	As a minimum, the annual rehabilitations of the program being considered. It is often necessary to do demand surveys.	None
Is evaluation possible without computer?	Yes, but costly and cumbersome.	Yes, but costly and cumbersome.	Yes	Yes	Yes
Time required to develop an application and make an evaluation	3 months	1 month	1 month	1 month	None

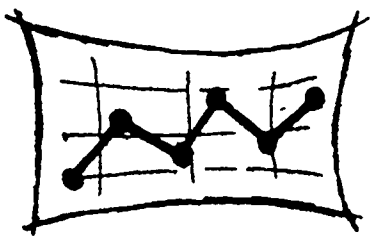
It is also appropriate to discuss the evaluative activities designated and some activities beyond that outlined in the charts. The need for program evaluation in State Vocational Rehabilitation Agencies is not for better evaluation methods, but for better application of the evaluative techniques at hand.

The Delphi technique is a procedure for systematically eliciting and refining the judgment of a group of experts. Generally, this technique involves:

(1) Obtaining opinions from experts by use of a questionnaire.
(2) Controlled sharing (or feedback), and reformulation, of the results among the participants in the group.
(3) Aggregating individual opinion into an overall group judgment.

A modification of this approach could be used to elicit opinions from participants at various levels, including the client level in the system.

Program research – Evaluation of overall program efficiency



There are several general techniques for assembling the information to conduct such an overall program evaluation of efficiency. Each technique really assesses the program in terms of very different criteria. The criteria of three example techniques are:

(1) The length of time before the client "pays back" the public for their tax expenditures on his rehabilitation. Such repayment takes the form primarily of taxes paid by the client as a result of his increased income and of savings in institutional costs and welfare payments which the government would, in the absence of rehabilitation, have incurred.
(2) The net increase in real income of clients and client satisfaction from government programs and employment.
(3) The most favorable ratio of social benefits to social costs among alternative programs and strategies. This approach is more properly formulated – in the economist's language – as maximizing net present value of social benefits.

The first approach looks at the program from the perspective of the taxpayer. The second approach views the program solely from the perspective of the client. The last approach, the one most generally known as benefit-cost analysis, tries to

aggregate benefits and costs over society as a whole. Often the latter approach is misused and the evaluator focuses only on those benefits and costs which can directly be measured in monetary terms.

The program perspective of the taxpayer or payback period model analyzes returns and costs borne by taxpayers. This model may be particularly useful in rehabilitation since the major cost of services is financed by non-client taxpayers, while most benefits of increased earnings are enjoyed primarily by the client recipient of services. Because the payback period approach concentrates on the net return to taxpayers, it can be an effective tool for showing legislatures and government executives the value of investing more resources in rehabilitation programs. Few, if any other social service programs represent such a good investment for the taxpayer, and this is true even for programs serving the most severely disabled and hard-core public assistance cases. Indeed, payback period analyses often show that the taxpayer's return is greatest in investing in these more difficult cases, since the taxpayer might otherwise be supporting these individuals for life on the public welfare rolls.

The technique of looking at the efficiency of the program in terms of the client's experience is probably the least applied of the three approaches to measuring higher-order efficiency and overall value of the program. The technique views as benefits the increase in client earnings. However, reductions in welfare payments as a result of increased earnings and income are viewed as a negative benefit. Similarly, program costs are not considered at all. Rather, the perspective of the client is concerned solely with foregone earnings while in the rehabilitation process and the costs borne directly by the client and his family.

The value placed by the client on reducing his state of dependency becomes very important. The value of considering this perspective is the insight it can give in understanding why and how clients may respond to various kinds of rehabilitation services.

The benefit-cost model is the most commonly applied. The technique is subject to many pitfalls in practice. The evaluator may choose to look and emphasize only those benefits or costs which are easily measured and valued in monetary returns. Readers of the analysis may focus only on benefits and costs based on "hard data." Agencies can be motivated by such analysis to focus on providing services only to those clients who provide the "greatest return," rather than using such analysis to evaluate alternative strategies and programs for rehabilitating particular disability groups. The results of the analysis can be highly sensitive to particular assumptions which are made, and these assumptions and their sensitivity are often not made explicit. As the analysis extends to valuing benefits (e.g.,

homemaking) which are not directly measured through market-set prices, agencies could conceivably adjust assumptions on valuing benefits to justify virtually any program, however inefficient or ineffective. The real need in cost-benefit analysis is to establish conceptual models with commonly accepted assumptions which most State agencies would employ, so that the results of the analysis would be comparable and changes in assumptions could readily be identified and assessed by readers of the analysis.

Program research and inquiry

Evaluation of work stability is best done through follow-up studies of clients some time after case closure. This is best done with a sample design drawing clients' names randomly from R-300 records across the full fiscal year. Clients are best contacted by phone or in person. Mailed questionnaires can be informative, but the biases in response are usually quite significant, since the overall response rate may be less than 50% or even 25%. The characteristics of clients who do not return mailed questionnaires must be carefully analyzed, and the generalization and interpretation of questionnaire information modified to reflect such response biases.

Program research – Client impact evaluation

Methods of obtaining such information on client impact include:

(1) Adding questions to State agency reports to be completed by samples of clients or all clients at case closure.
(2) Follow-up studies of clients sometime after case closure.
(3) Group sessions with clients and/or their families.
(4) Assessments of State advisory groups comprised of former clients and representatives of client organizations.
(5) Survey of client satisfaction at each closure exit (08, 26, 28, 30) should be done at frequent intervals.
(6) Employment stability survey of clients rehabilitated several years after closure.
(7) Survey of employer satisfaction.

Overall client impact can also be measured by experimental and program research techniques. Such techniques deal with how much of the measured change is actually attributable to the client's receipt of rehabilitation services. Sometimes this concern is also rephrased as the question: How does the client's current experience (after closure) compare to what would have been his experience, had he or she never received rehabilitation services?

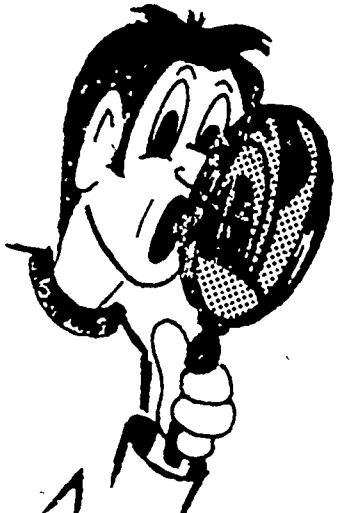
Outside consultants and judgment by experts

The outside consultant may be able to help evaluate that which is obvious to an outsider but not so obvious to people within the organization. Tradition does not justify inefficiency and mediocrity. The agency that is set in its ways and has deeply ingrained problems is the organization that needs the consultants the most.

In evaluations done by a consultant the all important point is not whether you agree with the findings but whether or not they are well documented. If the consultant is carefully chosen, you will see your agency through the eyes of an objective outsider.

Judgment by experts, although the least objective, is one of the oldest techniques of evaluation. Expert opinion is useful in selecting among several alternative courses of action. They are also useful when there is a lack of objective or theoretical knowledge that would clearly single out a preferred course of action. Experts may be from within or outside the rehabilitation system and may be either specialists or generalists. Expert judgment may be based on the application of existing theories or on intuition. There may be factual judgments and value judgments.

Observation – Visionary evaluation



The process of doing an evaluation by observation can prove to be tedious but not necessarily difficult. There are two important factors to be implemented in using this method of evaluation. They are:

(1) Have the observer include sufficient detail in his records.
(2) Have the observer prepare permanent records immediately after a day's observation is made.

The principal advantage of direct observation is that it culminates in a highly detailed and nearly complete record of a person's actual performance. It does not depend upon his ability to interpret a questionnaire correctly or upon his memory of a not very important and perhaps not very recent event. It is not influenced by any tendency to rationalize his behavior or to make it appear in the best light.

A second, but at times equally important, advantage is that it occasionally produces ideas that can be tested at a later date.

A disadvantage of direct observation in evaluation is that it provides information on behavior only. Behavior cannot always be easily interpreted.

Another disadvantage of the observation method is that the results can be biased by when and where the observations are made and the personal prejudices of the observer.

Two additional problems that this method of evaluation creates are:

(1) The observer has no control over important variables. Cause and effect are sometimes indistinguishable.
(2) The reports are narrative rather than quantitative.

All the disadvantages noted are important, but they are not necessarily negative. The important question is: "Can the limitations of the method be accepted considering the information it yields?"

Evaluation through historical and statistical analogy (management measurement procedures)

Statistical analysis and comparison of program inputs against professional or governmental standards are typical means of measuring management criteria.

Statistical analysis is the most common and often the sole technique used for measuring program criteria. Useful statistical measures include the mere ordering of observations (ranking – better or worse, more or less), the use of weighted averages (mean, median, mode), the distribution of cases (standard deviation, variation), and making comparisons (correlation, factor analysis, analysis of variance, nonparametric probability statistics measuring strength of association chi square and statistics measuring nonrandomness). Statistics can show the quantity of effort expended, imbalances in services to certain groups, the movement of clients through the rehabilitation process and so forth. Statistics provide gross data useful in pinpointing problem areas or areas in need of further study. To fully understand problems and their causes, higher-order measures, or indepth investigation into particular cases is necessary.

Standards

The Rehabilitation Services Manual, Commission on Accreditation of Rehabilitation Facilities or standards of practice outlined by professional groups are examples of models for evaluation of program activities. Data are collected and analyzed on factors suggested by the model and conclusions drawn. The limitations of this approach are based mostly on possible inadequacies of the standards themselves. Standards may lack comprehensiveness. They may be dated in terms of their representation of current reality or be based on generalities not applicable to all individual cases. For example, to measure success in terms of the number of rehabilitations per 100,000 population may not accurately represent large States. Also, this figure assumes that the incidence of disability is the same across all States. This may be a false assumption.

Another requirement for good administrative support of rehabilitation is a working information system. An information system will make pertinent data available to management in the shortest period of time and is necessary to support any administrative structure. Not only must adequate records be kept on case histories and treatment given, but also details of referrals, costs of delivery, and follow-up efforts should be well documented. Subjective reports on the progress of individual clients should supplement ratings of vocational achievement. Even more important, a management information system should link costs to client records, performance measures, and services received. This informs the evaluator of performance per unit cost and provides information which is of ready use in evaluation of management.

Field experiments or demonstrations

Field experiments and experimental demonstrations are two research designs for testing the relationships in the natural setting of ongoing programs. These are widely used in social science research because of the difficulty on controlling factors in the human sphere. In the field experiment there is control of some factors without interfering with the normal daily routine of clients.

The evaluator either controls the persons who are and who are not to be exposed to the program by changing an aspect of a program; e.g., by controlling workload of two different staff groups, or by changing worker assignments. The demonstration differs from the field experiment in that the social setting is changed by the program administrator rather than by the evaluator. In demonstration efforts research goals are generally of secondary importance.

In utilizing these designs errors may result from: inappropriate topic for inquiry, conception of a faulty experimental design, or failure to introduce or to retain appropriate controls. Successful field experimentation and demonstration rely on careful advance planning.

Evaluation through an experiment model

The experimental model ideally involves five procedures:

(1) Definition of the target population.
(2) Drawing a representative sample.
(3) Allocation of the sample at random into experimental and control groups.
(4) Administration of the program to one group and not to the control group.
(5) Comparison of resulting differences between the two groups.

There are generally considered to be nine categories of experimental and quasi-experimental designs. These range from the one-shot case study or "after-only" study, one group pre-test, post-test (the recipient(s) is measured before and after administration of treatment), to the pre-test, post-test, control group design. (There are two randomly selected, equivalent control and experimental groups. A "before" and "after" measure is made of both and comparisons made.) The latter design is the classic true experimental design and is the "strongest" in terms of the degree to which variables are controlled and unbiased. The one-shot case study, although the most commonly applied design in evaluations of rehabilitation programs, is the weakest.

In rehabilitation it is rarely possible to obtain equivalent control groups, since this would be difficult to arrange. Another alternative is to compare rehabilitation with other programs serving the disabled, eliminating a control group which receive no services. Indeed, it has also been argued that it is misleading to believe that control groups receive no treatment. The most commonly used designs are the "one-shot" follow-up study and "before and after" design. This approach is weak as far as pinpointing specific factors that contribute to rehabilitation.

Survey

By definition, survey means to look over – to see to examine as to condition, situation, or value – to appraise – to inspect – to scrutinize.

The survey is perhaps the most commonly used method of collecting information, other than statistical data, for the purpose of establishing facts, trends, or opinions. It is most frequently used in the form of a written questionnaire, although at times it is done verbally. The method utilized will depend upon the information being sought, the particular preference of the person doing the survey, and often upon the amount of time available to get the desired results The advantage of a written survey is that the information can be reviewed at the convenience of the surveyor.

The survey is a basic tool of the evaluator. An important thing to keep in mind is that the method of questioning strongly influences the responses elicited. Therefore, the effective evaluator is one who learns how to structure his result-getting survey.

It is important that the survey reflect a sense of partnership. Employees and clients like to know that their responses not only present facts but also gives them an outlet for the expression of their opinions.

In developing a survey questionnaire, it is vitally important that the evaluator know precisely what he is evaluating. His questionnaire should elicit a complete willingness to respond accurately and thoroughly. Information that is already known or obtainable through other means should not be a part of the survey. The evaluator should know what information he needs and what the best sources of this information are.

Input-output model and evaluating case flow

The rehabilitation process begins with referral and proceeds through evaluation and diagnosis, eligibility determination, development of vocational objective, development of plan of services, provision of services and ends with some type of closure, preferably because of satisfactory employment. This is the standard against which program indicators are judged. The task is to determine how actual practice deviates from the standard.

The movement of individuals through the rehabilitation process is defined as case flow.

Case flow information can give an indication of whether the program is proceeding as expected.

The experienced vocational rehabilitation counselor annually closes clients at about the same rate as new clients enter his client load. The total number of clients closed by the experienced counselor may vary from year to year depending upon the size of his client load. But the percentage of cases closed from each closure exit of the total closed from all exits remain relatively constant.

Another computation which broadly measures client flow is to determine each year the ratio of clients closed in all statuses to the total clients involved in the program. A ratio of .500 or above reflects the agency is either in balance with new referrals or there were more cases closed than entered the case load. Ratios have meaning when adjustments are made for case composition and when comparisons are then made with past performance, the national average, or other states.

A program evaluation unit may observe and study the total State caseload, the client's progress through the statuses, and his exit from the rehabilitation process. Evaluation focuses on the flow of the client population through the process and the choice and speed of services delivered to the client. The time a case is in process from referral to closure and the balance of clients entering the process of those exiting are benchmarks which give a general overview of the effectiveness of program operations.

Yet, it is important to remember that whether the client received what he needed as quickly as possible, may not measure quality of service. Thus, there is a need for combination measures and for the periodical review of a sample of cases.

Also critical to program evaluation is an examination of the individual's progress through the various stages (statuses) from referral to closure. The length of a client's stay in any one status partially reflects the counselor's ability to guide the client through the many services needed to affect his rehabilitation. The assumption, which is borne out by cost data, is that an unusually long period of time in various statuses often indicates that resources are not being effectively used. The client's goals are not being achieved, and the probability increases that the client may drop out in frustration. The counselor is often expending considerable amounts of his own time and energy and of case service money in efforts which are not producing results.

The State agency, to perform evaluation, must develop the ability and expertise to measure client flow at frequent intervals. The first step in developing this ability is to identify those points in the rehabilitation process that require major decisions by the counselor and client.

For example, a quarterly analysis might be done of the flow of cases through strategic points of the rehabilitation process, such as referral and applicant status, 00, 02. Such an analysis might take the form of:

(1) Analyzing clients in status 00-02 (referral, applicant) three months or longer. Research shows a negative correlation between the length of time which a case stays in status 00-02 and a successful closure status 26.

(2) Analyzing clients in status 10 (Plan Development) and 12 (Plan Completed). The number of months a client remains in status 10 or 12 may reflect the counselor's ability to make decisions at crucial points in the rehabilitation process.

(3) Analyzing clients in status 20 (ready for employment) and 24 (service interrupted). The length of time a client is in status 20 may reflect on the quality and choice of services planned and implemented. If the client remains in status 20 longer than three months, the services rendered may not have been adequate. Direct counselor intervention may be necessary for placement purposes. If a client stays in status 24 three months or longer in most instances, the client should be rephased through the rehabilitation process or closed through one of the closure exits.

Leading indicator

Indicators exist that can be used to assess several aspects of management. For example, a large percentage of status 30 closures (closed before rehabilitation plan initiated) or status 28 closures (closed, unemployed after plan initiated) may indicate things like: High counselor turnover, an inactive caseload, lack of client service funds, work performed by an inexperienced counselor or support personnel, insufficient data upon which to determine eligibility, and improper status classification which more appropriately should have been directed to status 04 or 06, extended evaluation. An annual evaluation of status 28 and 30

closures offers extensive information concerning the rejection of clients in the State agency. Did the client drop out because he found a job on his own, because he was dissatisfied with his plan, because he feared loss of his welfare support, or what?

Other causes and indicators of program imbalance are:

(1) Input exceeds output – number of new cases is greater than the number closed from all categories of the vocational rehabilitation process.

(2) Increase in new referrals over the counseling staff's ability to process them.

(3) Lack of experience of the counseling and support personnel.

(4) A critical budget imbalance for various program services.

(5) Lack of funds.

(6) High staff turnover rate.

(7) Over-extended program expansion – expanding programs at a faster rate than the capacity of the agency to deliver services.

(8) Radical change in program direction or priority.

(9) Management and organization constraints – regulations, inadequate supervision and/or administrative direction.

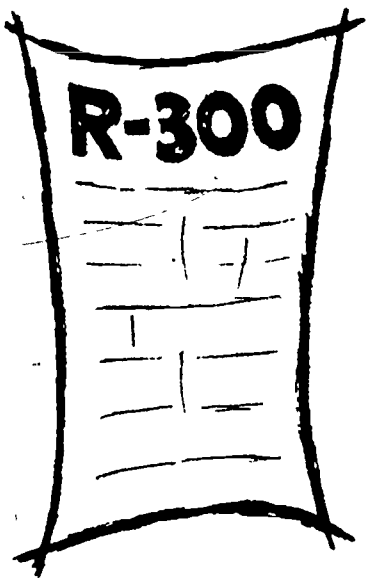
All or any one of the above factors can contribute to the inability of an agency to function optimally. Many of the factors outlined above are external and may result from any number of circumstances, such as legislative mandates, rapid population increase, inadequate tax support, and increased awareness of community health and social problems.

Life-cycle analysis

The life-cycle analysis can be used when a new program is initiated. In this approach the evaluator tries to evaluate this new program with a similar, older

program, whose overall pattern should be similar to that of the new program. The assumption here is that both programs should have a similar program pattern.

Federal reporting and performance statistics – A tool for evaluation



The Federal programs provide case service reports (R-300) and many other statistical abstracts. The R-300 form not only provides basic information to the rehabilitation practitioner, but it is also a basic tool of the evaluator. The questions on the R-300 lend themselves to brief, precise answers.

There is, of course, room for error since the R-300 is completed by humans, and they are fallible. Even the most careful and precise individual has a chance of making an error. Nevertheless, it remains a most factual document.

The R-300 is designed to take us completely through the rehabilitation process. Thus, it provides the evaluator with a rather complete source of data. It readily lends itself to evaluation at many stages in the rehabilitation process.

The data that can be retrieved from the R-300 often is the most readily accessible data available in an agency. It not only provides the agency with the information that is necessary for reporting to the Federal Government, but it can provide the State agency with an overall picture of who it is serving, at what costs, with what results, plus time expended, and the data is identical with all States reporting to the Rehabilitation Services Administration, thus facilitating State Agency comparisons.

The design of the R-300 is such that it lends itself to review by either humans or computers. The information contained therein permits ongoing evaluation without the necessity for additional forms or people.

There are limitations, however. It does not measure such things as case recording, subjective observations, attitudes, or feasibility of services, just to mention a few. The evaluator seeking this type of information must utilize other methods of evaluation.

In using the R-300 when doing an evaluation the evaluator can limit himself to one factor or he can evaluate many factors. He can evaluate one counselor or the entire counseling staff. He can evaluate one day's work or one year's work. The range of things that can be evaluated through the R-300 is limited only to the imagination of the evaluator.

Some typical Federal publications using data from the R-300 case service report are:

(1) State Vocational Rehabilitation Agency Program Data (published annually by HEW)

(2) Caseload Statistics, State Vocational Rehabilitation Agencies (published annually by HEW)

(3) Statistical Notes (published monthly by HEW)

Client feedback

The need for client feedback into the rehabilitation program should be maximized. The client perspective is highly valuable as a resource for program improvement. It would be desirable if State agencies would routinely question or sample clients to determine the client's opinion of the services he received.

Such questions might include probes on:

(1) Whether the job in which the client is employed makes use of the training he received as part of his rehabilitation plan.

(2) Whether his employment or other status at a 26 closure reflects that the needs for which he came to the Division of Vocational Rehabilitation have been met.

(3) What other problems does he foresee that might interfere with his keeping his job.

(4) His or her assessment of improved personal capabilities in non-job activities as a result of the rehabilitation services received.

(5) Changes in the employment status of other family members during the rehabilitation process as a result of services received.

(6) His evaluation of the quality and sufficiency of services received, and of any difficulties or problems encountered during the rehabilitation process.

(7) The amount of money which the client and his family may have personally paid for services, etc., during the rehabilitation process.

(8) Any savings in medical, child care, housekeeping, attendant, or other costs which the client and his family have achieved as a result of the client's improved capabilities

(9) Services received by the client from agencies other than those recorded in his rehabilitation plan

(10) Client suggestions for improving services to future clients.

(11) Client willingness to participate in consumer organizations working with rehabilitation agencies and future clients.

Individual case review as an evaluative activity

Maintaining the integrity of the records is the responsibility of the counselor and the first-line supervisor.

Individual day-to-day case review is not a function of program evaluation but a responsibility of personnel who supervise casework review and management. By case review we mean the activity of opening individual client case folders and reviewing them to determine conformity with State and Federal governmental standards and good professional practice.

CHAPTER V

PROGRAM EVALUATION: AN INVITATION TO INNOVATION

The purpose of this chapter is twofold. The first part will deal with suggestions for implementing the findings of a Program Evaluation Unit, and the second part will be to examine some considerations of importance in attempting implementation.

We all know how hard it is to change our own ways and to get people to change theirs. When one goes about trying to implement change of any kind, the person responsible for effecting the change should be fully aware of these resistances to change.

Program evaluation utilization

An agency wishing to take full advantage of program evaluation must have built into its system a structured ongoing procedure that helps to insure that the results of valid evaluation are given serious consideration. It is evident that very often the results of quite valid evaluations are lost or not acted upon. Perhaps the reason for this is because the agency has not set up functional utilization procedures. It is recommended that the procedure be formal and structured.

The results of an evaluation should be presented in a written report that clearly states its conclusions, and data upon which the conclusions were based. Recommendations should be included where indicated.

The initial report would be sent to the agency administrator or his designee. Copies of the report would then leave the evaluator's desk earmarked for review by agency personnel directly responsible for the program under evaluation. A response should be expected from the program personnel within a reasonable or designated time period.

The program personnel should respond to the report and would have an obligation to make recommendations relative to the need for changes and additions

within the program. This response should be sent to the administrator's office for policy and administrative consideration

Perhaps the most important part of this procedure is the responsibility now facing the office of the agency administrator.

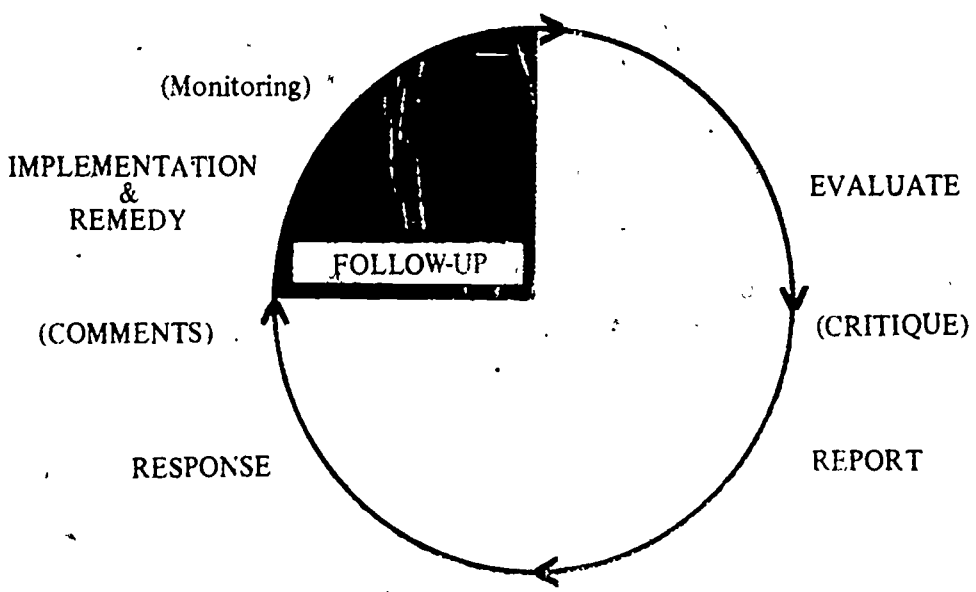
It is the responsibility of the program evaluation unit to make the state agency director fully aware of the program evaluation findings. The director's response to the findings of an evaluation report could be the single most important factor in its implementation.

Once a program administrator has made some decision in response to the findings of program evaluation, there is still a need to monitor the implementation of that decision. Too often, decisions are made, but the follow-through on implementation is inadequate.

The responsibility for monitoring should be explicitly assigned by the agency director, along with the requirement for a report back to his office within a set time period.

Without the support of the agency director, program evaluation can never become an ongoing, effective source of agency innovation and improvement.

Evaluation
Agency and Administration Cycle



Dynamics of organizations and program evaluation implementation

The outline for this section will include:

(1) Organizational constraints to change, and
(2) Other factors that should be kept in mind when trying to implement a program evaluation unit into vocational rehabilitation operations.

Organizations and change

It is possible to identify some organizational characteristics which constitute considerations for anyone trying to effect change in an organization.

> There are at least four types of characteristics which all organizations are likely to possess. These characteristics are. Survival, stability, purpose, and membership.

Survival is probably the first commandment for organizations as well as for people Some activities or information from outside the organization may cause problems in the form of exploitation, subversion, take-over, or contamination. All organizations need to maintain the ability to intercept these messages. When organizations become especially concerned about survival, this interception may keep out virtually all information from the environment.

Stability is an expressed need of all organizations. To maintain themselves and carry out their functions, they must maintain some sort of internal steady state of equilibrium. Information which is new in content may be upsetting, constituting a threat to the established equilibrium.

Nearly every organization is bound together by some common purpose – usually a purpose which extends beyond survival and stability. To hold to this purpose they must define and establish the parameters of vocational rehabilitation programs, and agencies will avoid inputs contrary to defined practices.

Fourth, it should be noted that the fact of membership in an organization creates a very complex and many-sided barrier to outside influences. Those who share common membership in one organization are also likely to share many attributes such as a common language, a common set of values, a common ideology, and a

common perception of role and status. All these attributes which tie them together also set them apart from outside organizations.

There are many factors related to the necessity for limiting inputs into an organization. Some of the factors reducing knowledge flow into an organization appear below:

(1) The need for stability
Many writers have addressed themselves to the general impact of order and constancy of knowledge flow. Most organizations by their very nature are conservative, and there is a constant concern in organizations to maintain internal stability.

(2) Use of coding schemes
Members of an organization which requires loyalty and commitment tend to acquire common coding schemes or shared ways of articulating the things relevant to them. Organizational coding schemes can be a determinant of communication, in that they distort, reject, accept, and transform what is said. A group establishes its own particular identity by enlarging its uniqueness. One way of establishing this uniqueness is to define a vocabulary peculiar to the group. A unique coding scheme or vocabulary thus constructed tends to make outside communication with the organization difficult.

(3) Fear of outsiders
Knowledge from the outside of an organization can many times be viewed as a threat to it, not only in terms of upsetting the orderliness as a consequence of a deliberate change, but also as a direct maligning of the organization and its members.

(4) Personal threat
Related to the suspicion of outsiders as a threat to the organization as a whole is the belief that outsiders will say or do something that will harm an organizational member. Newman (1958) has noted that behavioral scientists are many times refused admittance to organizations by members who think whatever the scientists generate will be an indication of member failure.

(5) Economic conditions

The economic situation of an organization has a great deal to do with the knowledge it accepts and utilizes. If an organization has a very solid growth pattern and financial situation, it can afford to seek out new and uncertain discoveries and innovations for experimentation.

(6) Size

Research on the impact of organization size on information flow is quite consistent. Mansfield (1963) found that larger organizations adopt new ideas and technology at a faster rate than smaller organizations. Most of the research done in this area concurs with this point of view.

Now that we have enumerated some of the barriers to the input of new knowledge into organizations, it is appropriate to turn to some mechanisms that an organization uses to overcome such barriers. A person responsible for trying to implement a program evaluation unit into an agency should keep the following considerations in mind:

(1) Perceived reward value

Perhaps the most fundamental motive for seeking new knowledge is its potential reward value. An organization's speed of response to a change is directly proportional to the amount of value perceived by the organization.

(2) Perception of crisis

The perception of great difficulty in an organization usually results in a hurried search for help. Thus, a crisis can stimulate knowledge flow inside and outside an organization.

(3) Examining other organizations

A person interested in effecting change in an organization can facilitate knowledge entry by sending a member outside to procure new knowledge from other relevant organizations. There are several forms such outside assignments can take, all of which may be considered as types of training. Formal academic conferences, courses, conferences, seminars, professional meetings and conventions often contain knowledge inputs that are of great utility to the home organization.

(4) Training
Organizational training is a potent means for encouraging or discouraging knowledge flow The training of top and middle supervisors and counselors is one of the key factors determining the rate of introduction of innovations.

(5) Importing human competence
Another way for an organization to increase the infusion of knowledge would be to hire a person who possessed the expertise and competence it needs. This could be described as the importation of human competence.

The foregoing have been considerations in an organizational sense regarding the implementation of a program evaluation unit into a vocational rehabilitation agency's ongoing operations.

> Havelock (1969) has proposed a most interesting perception regarding organizational change. It is as follows: "Organizations. like people, can be said to have values, purposes, status, size, capacity, etc. Many of these characteristics operate to facilitate and inhibit knowledge flow in organizations in much the same way as they do in individuals. . . . . The organizations are composed of people. Hence, in many respects interorganizational processes can be reduced to interpersonal processes." (Havelock, 1969)

With the above quotation in mind. it is appropriate at this time to discuss factors affecting how people go about changing and considerations for anyone trying to effect a change.

Individual resistances to change and ways to overcome them

Personal resistance to change has been studied extensively. Goodwin Watson (1962) described the stages of resistance to a typical innovation as.

(1) Massive, undifferentiated, few take the change seriously.
(2) Pro and con sides identifiable, resistance can be defined and its power appraised.
(3) Direct conflict; resistance mobilized. This is a crucial stage for survival.

(4) The changers are in power. Wisdom is needed to keep opposition from mobilizing. Resistors are seen as cranks or nuisances.

(5) Old adversaries are as few and alienated as advocates were in the first stage. Advocates now resist any new change.

Resistance to change is not a single entity or process. But it has many parts. Some major features are:

(1) The change is a threat to the established social structure. Innovations sometimes pose a threat to established social structure. A general finding of these studies is that resistance to innovation is roughly proportional to the amount of change required in the social structure, and the strength of the social values which are challenged.

(2) An innovation can be a threat to vested interests. Generally when a ruling minority has vested interests in keeping things the way they are, only token innovation takes place. On the other hand, change may be accepted at upper levels of a hierarchical organization only to encounter vested interests at lower levels in the organization.

(3) The innovation can be a threat to the individual. Individual resistance to change is usually because the person is unfamiliar with the way things will be done when the change is instituted. They are content and satisfied with the way things are and, hence, resist any innovations that may change their day-to-day activities.

A change also can be construed as being a threat to the individual's status. When a change appears to diminish the influence or power of a certain group, the change will be vigorously resisted.

(4) Resistance because of the characteristics of the innovation Some innovations are resisted primarily because they require group acceptance rather than individual acceptance, and the characteristics of the innovation make group concensus difficult to achieve. An example of an innovation which has

encountered widespread resistance because of this factor is the universal adoption of the metric system

In addition to our knowledge of why people resist innovation, we must also know about how people go about adopting and using new information. The following section will deal with generalizations and principles extracted from the literature of how people go about utilizing new information.

Utilizing new information

Research has been done in diverse fields regarding the diffusion, dissemination, and adoption of innovations.

This research has yielded some generalizations that one should be aware of when attempting to effect change in vocational rehabilitation agencies.

The first generalization of importance is a finding that people often do not adopt new ideas, practices, and products upon first hearing about them.

Instead, people proceed through a series of discrete, identifiable stages in adopting new ideas. These stages are:

(1) Awareness – The first knowledge about a new idea, product, or practice
(2) Interest – The act of seeking of more extensive and detailed information about the idea to determine its possible usefulness and applicability.
(3) Evaluation – The weighing and sifting of the acquired information and evidence in the light of the existing conditions into which the practice would have to fit. This stage is sometimes called "mental trial."
(4) Trial – The tentative trying out of the practice or idea accompanied by acquisition of information on how to do it, and
(5) Adoption - The full-scale integration of the practice into the ongoing operation.

A second generalization of importance for effecting change is that information sources vary in their effectiveness at different stages in the above-mentioned awareness-adoption continuum. Impersonal information sources such as research reports, articles, etc., can create awareness, interest, and even some mental trial. However, in the latter stages of this continuum, personal sources of information are often necessary in order to assure trial and adoption. The implications for the "change agent" are unmistakable.

A third generalization that should constantly be kept in mind by the interested change agent is that organizations have within them people who are called "opinion leaders" (Wilkening, 1952). An "opinion leader" is a person within a group, who because of rank, status, role, or personality, is the one looked up to by other members of the group. For a new idea to be accepted by a group, it often must be first legitimatized by these "influentials." It is crucial that these "opinion leaders" be first identified and then utilized in fostering adoption of new ideas.

A further generalization that has been proven by extensive research is that the target audience or the people who will take on the new innovation must first perceive the need for the innovation in order to insure its successful integration into ongoing practice. In short, the target audience must be involved in the early stages of the planning for innovation. If initially involved with the planning for innovation, when change does occur, its chances of surviving are greatly enhanced.

A further generalization is that adoption is easier if the new idea, practice, or product has a clear-cut advantage over that which it is attempting to replace. Demonstration of a clear-cut advantage enhances the chance of innovation becoming integrated into ongoing practice

Consistent with the former generalization is the one that the new idea, practice, or product should be easily demonstrated. If people can readily see the new way of doing things and find that it is workable, its chances of adoption are increased.

Another factor is that if the new idea, practice, or product violates existing value structures, it will be harder to adopt. Any innovation that is too radical a departure from existing value patterns is also in for tough sledding. Consistent with this finding, the innovation proposed should be as congruent as possible with existing value structures.

If an innovation costs too much money to utilize, its chances of adoption are limited. If the innovations can be instituted with little or no increase in expenditures, their chances of being adopted are increased.

If partial adoption is possible, the new idea, practice, or product will more readily be utilized. If one can set up a scheme whereby an innovation is adopted on a partial basis rather than initial full-scale integration, its chances of survival are increased.

The strategy for implementing a program evaluation unit will vary from agency to agency, due to differences in administrative policy, procedure, etc. Regardless of the strategy used, the organizational factors and research regarding change proposed here will be helpful to the agency director in his efforts to get an evaluation unit implemented.

Assuming the existence of a program evaluation unit in an agency's operations, the crucial issue of assuring implementation of its findings must be faced by the top State administrator.

APPENDIX A

PURPOSE AND CHARGES

IRS Study Group I
on
Guidelines for Evaluating Vocational Rehabilitation Programs and Services

Purpose

The purpose of the study group is to develop criteria and methodology for evaluating effectiveness and quality of services within State vocational rehabilitation programs.

CHARGES

1. Explore current State program evaluation methods, e.g., North Carolina, Florida, Michigan, Texas, Wisconsin; review other pertinent social agencies and evaluative methods; and review and analyze various methods (PPBS, OPS, MBO, PERT, CPM).

2. Develop guidelines for evaluating State agency programs in such areas as:

   (a) Nature and scope of services, including
   - quality of services
   - efficiency of case management
   - time factor in processing cases
   - attention to target group, etc.

   (b) Composition, role, and functions of a model Program Evaluation Staff

   (c) Capacity to provide planned services
   - utilizing of present staff
   - staff development

   (d) Public relations and public information (how the State agency perceives and publicizes itself)

(e) Effectiveness of use of financial resources

(f) Effectiveness of working relationships with public and private agencies and facilities

3. Give recommendations for implementation and use of guidelines

(a) Give citations of effective instruments in use

(b) Coordinate with CSAVR Committee on goals and standards, statistics, and the Ad Hoc Committee on Evaluation.

APPENDIX C

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GLOSSARY

ACCOUNT CLASS – A descriptive heading or numeric code used to categorize similar financial transactions according to program, function, object, or source, contained in a chart of accounts.

ACCRUAL ACCOUNTING – An accounting system in which revenues and expenditures are recognized as they are earned or occur regardless of when payment is made or when the income is actually received. This system reflects the resources available to an agency, the receipt of goods and services, the use of resources in relation to work performed and benefits derived during a particular time period, and the liabilities of the agency. For management it enables more effective controls because it provides data on all available resources and on expenses that can be compared with and related to program performance during a given period. Accrual accounting in Federal agencies is required by P.L. 863 (August 1, 1956). Frequently it is contrasted with the cash basis of accounting which emphasizes cash receipts and disbursements during a given period.

ALTERNATIVES – Within any one agency, this term means other possible programs besides those already decided upon. It denotes a comparison of two or more programs (that is, two or more possible approaches) as possible ways of fulfilling the same objective. Used in this context the term is output-oriented, it suggests substituting an entirely different program (and therefore a different output or outputs) for a program already planned or in process. On the other hand, alternative ways to do a job which has been decided upon takes the program as given, and raises possibilities for changing the mix of inputs.

ANNUAL PLANNING CALENDAR – Phases of current organizational activities are integrated with long-range planning on scheduled annual cycles to coordinate procedures for all agencies or program centers; time schedules may be designed.

APPROPRIATION – An allocation of funds made by a governing authority for specified purposes and often restricted as to the time when it may be expended.

BENEFIT-COST ANALYSIS – (See Cost-Benefit Analysis)

BUDGET -- A financial plan serving as a pattern for and control over future operations, hence, any estimate future costs any systematic plan for the utilization of manpower, material, or other resources. The term "budget" in the Federal budget context also refers to the summary totals of appropriation, receipts, expenditures (excluding net lending), expenditure account surplus or deficit.

BUDGETING - The process of translating planning and programming decisions into specific projected financial plans for relatively short periods of time. Budgets are short-range segments of adopted action programs which set out planned accomplishments and estimate the resources to be applied for the budget periods in order to attain those accomplishments.

BUDGET DOCUMENT A written statement of an estimate or plan describing expenditures and revenues for financing an organization's entire program for a specified time period, usually one year, the most common fiscal year begins July 1 and ends June 30, at the termination of the defined period, the budget technically no longer exists, other than as a historical document.

BUDGETARY PROCESS -- A continuous activity comprised of planning, formulation of a budget document, interpretation, presentation to the approving authority, formal adoption, fiscal administration, and appraisal.

COMPONENT - Level of program subordinate to element level and above task level.

COST-BASED BUDGETS - Budgets in which activity levels are to be estimated in terms of value of resources to be consumed in carrying out the activity, rather than in terms of obligations incurred or payments made. These resource requirements, when distributed to program elements and categories, provide a cost basis for program planning and budgeting.

COST-BENEFIT ANALYSIS - A means of assessing the worth of existing and proposed projects, it involves the enumeration and evaluation of all relevant costs and benefits over a period of time, ideally, benefits should exceed costs, or $\frac{B}{C} > 1$, measurement criteria for the benefits should be specified. This is an analytical approach to solving problems of choice. It requires the definition of objectives, identification of alternative ways of achieving each objective, and the identification, for each objective, of that alternative which yields the greatest benefit for a given cost or that alternative which produces the required level of benefits at the lowest cost This same analytical process has also been referred to as cost effectiveness analysis when the

COST-BENEFIT ANALYSIS – (Contd.)
benefits or outputs of the alternatives cannot be quantified in terms of dollars. However, there is increasing interest in combining non-economic benefits with dollar benefits in evaluating particular programs, and methods for doing this are being developed.

COST-EFFECTIVENESS ANALYSIS – A means of relating the cost of a particular activity or project to effective performance or goal attainment: the decision maker may choose from among feasible alternatives on a basis of least cost and greatest effectiveness.

CRITERIA – Measurements which are used to examine the relative degrees of desirability among alternatives or the degree to which a course of action meets an intended objective.

CRITICAL PATH METHOD (CPM) -- Network Analysis model. It has its own modeling language; it differs from PERT in only one fundamental respect: CPM seeks to determine the expected times of completion of the total project and times of completion of the subprojects of which it is composed. PERT goes further and seeks to estimate variances associated with these expected times of completion.

CROSSWALK -- The expression of the relationship between the program structure and the appropriation-budget structure; the translation of multiyear program and financial plans into annual budgets; a simple table vertically listing program categories and horizontally listing appropriations and budget activities; based upon the program budget code.

DIRECT COSTS -- Actual or budgetary costs that may be charged directly to, or prorated as a part of, the cost of a program, service, function, or department. They are eliminated if a program is eliminated or added if a program is added.

EFFECTIVENESS – The performance or output received from an approach or a program. Ideally it is a quantitative measure which can be used to evaluate the performance level achieved in relation to criteria pertaining to end objectives. An example of such a measure would be the increase in annual earnings of a group of participants in a Federal retraining program. This example assumes that an objective of the retraining program is to increase the level of income of program participants. Under this assumption, a measure of output, such as the number of people who completed the program, while

EFFECTIVENESS - (Contd)

informative, would not be a valid measure of effectiveness since the objective is to increase income, not merely to retrain people.

ELEMENT – Level of program subordinate to program level and above component level, cost elements include personal services, contracted services, equipment, materials, supplies, and fixed charges.

EVALUATION – Comparison of desired outcomes or objectives with actual accomplishments, based upon educational performance indicators, such as indices that measure changes in pupil cognitive development.

FUNCTION-OBJECT BUDGET Widely used presently by local public schools to identify costs under a number of broadly defined function and object categories, such as administration, instruction, debt service, and plant maintenance; emphasis is upon objects of expense rather than programs of the school.

GENERAL SYSTEMS THEORY An interdisciplinary, holistic, integrative approach that includes logico/methodological investigations of the empirical, the philosophical basis for systems analysis and related procedural strategies.

HEURISTIC – Solution of a problem by a trial and error approach frequently involving the act of learning, and often leading to further discovery or conclusions without providing proof of the correctness of the outcome.

INDIRECT COSTS – Actual or budgetary costs that are not readily identified with a specific program, service, function, or department and that are seldom completely eliminated if a program is eliminated.

INPUT-OUTPUT ANALYSIS - An economic technique designed to examine the effect of changes in certain input variables to the outcome or output variables of the system under study, a form of systems analysis: inputs are the resources employed to achieve objectives and outputs are the products of a program, often expressed numerically

MANAGEMENT BY OBJECTIVES (MBO) – Management approach that tends to minimize undesirable behavioral effects. The principal feature of this type of management is the establishment of specific performance goals for each position, particularly for each managerial position. By stressing these objectives, overall control is achieved through self-control by individual participants

(MBO) -- (Contd.)

Rather than applying control from above, the emphasis is placed upon control from within. Of course, establishment of objectives and appraisal of performance is performed under the direction of a higher-level manager. In each case, however, the stress is upon accomplishments and results. MBO distinction is found in its careful delineation of formal objectives for a specific time period.

MANAGEMENT INFORMATION SYSTEM (MIS) – Integrates the dynamic functions of an organization, such as instruction, personnel and finance, and provides computer-aided systems of information control for administrators; it may be a reporting system or a decision-making system, depending on level of application.

MARGINAL ANALYSIS – The process of identifying the benefits or costs of alternative behaviors as unitary changes in the alternative variables occur and equalizing the benefit-cost ratio to form a point of indifference (trade-off) in benefit per additional unit of resources input for decision-making purposes.

MULTIYEAR PROGRAM SUMMARY – Concise description in numerical, dollar, and other values for the past year, current year, and future year projections, the authorized program output, input, personnel and material needs, and proposed program changes.

NEEDS RESEARCH – Formalized studies and problem-solving steps designed to specify the most appropriate level of systems analysis to be used.

NETWORK ANALYSIS - A technique used in the planning, scheduling, and solving of problems related to large-scale projects which involve a great number of interrelated decision points or events. The project is displayed as a network which connects these points or events in such a way as to show the various alternative "paths" which may be taken from each point. When used in scheduling, each event is dependent upon certain necessary events having preceded it. These dependencies are portrayed by the connecting aspects of the network.

OPERATIONS ANALYSIS – A term used by the US Office of Education to describe quantitative, analytical studies in education; it combines operations research and systems analysis.

OPERATIONS RESEARCH (OR) -- The use of analytic methods adopted from mathematics and other disciplines for solving operational problems. Among the common techniques used in operations research are linear programming, probability theory, decision theory, Monte Carlo methods, and queing techniques.

PERFORMANCE BUDGET -- Used to evaluate work-cost data in terms of unit work measures, the forerunner of the program budget; led to the introduction of activity classifications, evolved in the era of scientific management; provided numerous workload statistics but did not aid greatly in planning future courses of action.

PLANNING Planning in the long-range sense is the selection or identification of the overall, long-range objectives of the organization and the analysis of various possible courses of action in terms of their relative costs and accomplishments or benefits in order to decide on which courses of action (such as programs) to follow in order to achieve those objectives. The analyses required are variously referred to as cost-effectiveness, cost utility, or cost-benefit (benefit-cost) studies. Essentially, this type of planning involves deciding on what the organization is in business to do and generally how it is to be done. This is also called strategic planning.

PROGRAM BUDGET -- Relates resources, financial and otherwise, to an organization's activities, outputs, services, missions, or programs; the financial expression of value priorities, helps to achieve cost-effectiveness if not cost-reduction, based upon a program structure classification: the budget is a statement of policy that relates cost to differential programs; sometimes used in a broad sense to denote the entire process of PPBS.

PROGRAM CATEGORY - A classification within a program structure which groups programs which have the same or similar objectives.

PROGRAM ELEMENT -- A subdivision of a program category which comprises the specific products that contribute to an agency's objective(s). If an agency's operating program is distributed over several program categories, each part of the operating program identified by a discrete program category is a program element.

PROGRAM EVALUATION AND REVIEW TECHNIQUE (PERT) -- PERT and CPM (Critical Path Method) are network analysis models. Each has its own modeling language, but they differ in only one fundamental respect: CPM

(PERT) – (Contd.)
seeks to determine the expected times of completion of the total project and times of completion of the subprojects of which it is composed. PERT goes further and seeks to estimate variances associated with these expected times of completion.

PROGRAM MEMORANDUM – An internal planning document that records analyzed programs and lists alternatives and recommendations.

PROGRAMMING – Programming is the process of deciding on specific courses of action to be followed in carrying out planning decisions on objectives. It also involves decisions in terms of total costs to be incurred over a period of years as to personnel, material, and financial resources to be applied in carrying out programs.

PROGRAM STATEMENT – A formal, recorded description of multiyear program needs, objectives, authority, inputs, outputs, and supportive information.

PROGRAM STRUCTURE – Organization of the general program areas, subprograms, elements, components, and tasks; it facilitates analytic comparisons of the costs and effectiveness of alternative programs; programs may cut across existing departments and agencies.

PROGRAM SUBCATEGORY – A subdivision of a program category. It combines agency programs or activities on the basis of narrow objectives within the broader objectives of the program category.

PRORATION OF COSTS – The distribution of costs to two or more program areas in proportion to the benefits provided; basis for proration may be a formula or some other arbitrarily determined procedure.

QUANTIFICATION – The numerical expression of variables.

SCENARIO – A statement of assumptions about the operating environment of the organization to be studied; it is a helpful aid in making projections of different future conditions.

STATISTIC – A measure, quantity or value which is calculated from a sample rather than from the population.

STATISTICAL INFERENCE – Using information contained in a sample to make predictions about a larger set, the population.

SYNERGISM - Cooperative action of discrete units or agencies which results in a total effect that is greater than the sum of those effects taken independently.

SYSTEMS ANALYSIS - Systems analysis may be viewed as the search for and evaluation of alternatives which are relevant to defined objectives, based on judgment and, wherever useful on quantitative methods, with the objective of presenting such evaluations to decisionmakers for their consideration. It emphasizes the system concept under which any course of action designed to achieve an objective is viewed as a system requiring inputs and producing outputs. The inputs and outputs involved may take on any of a large variety of forms. In this sense, system analysis encompasses both cost-benefit and cost-effectiveness analyses, as well as other types of analysis which may be more limited in scope.

UNASSIGNED SUPPORT -- A budget category containing items that are not assigned to more direct program, service, or function-object categories; a kind of residual budgetary item.

VARIABLE -- A quantity that may increase or decrease without other essential changes.

WELFARE ECONOMICS – The study of the economic well-being of all persons as consumers and as producers, and possible ways in which that well-being may be improved. It is also known as NORMATIVE PRICE THEORY.

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A BRIEF BIBLIOGRAPHY ON PROGRAM EVALUATION

The first group that follows consists of items for quickly getting an overview of issues, and occasionally methodology problems, relating to evaluation of social programs generally. The second group consists of selected key studies or overview essays relating specifically to rehabilitation programs.

GENERAL

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Rein, Martin, "Social Policy Analysis as the Interpretation of Beliefs," Journal of the American Institute of Planners, 37 (1971), pp. 297-310.

Approaches to Policy Analysis

No single book or collection of readings can cover all methods of program planning. In part, this is due to the sheer variety of techniques that may be employed in planning. But the gap is also due to the chronic division between the teaching of the content and philosophy of planning and the teaching of methods. The following books may be helpful for thinking about kinds of methodological approaches:

Rivlin, Alice M., Systematic Thinking for Social Action. Washington, D. C.: The Brookings Institution, 1971. A good overview of analysis for planning from the Federal agency point of view. Very suggestive for thinking about what kinds of methods might be useful.

Williams, Walter, Social Policy Research and Analysis. New York: Elsevier, 1971. An attempt to look at how Federal social agencies used social research in the 1960's. Tends to use education examples.

Frameworks for Program Planning: PPBS

The most recent effort to develop a comprehensive approach to program planning.

Joint Economic Committee, U. S. Congress, The Analysis and Evaluation of Public Expenditures: The PPB System. Washington, D. C.: U. S. Government Printing Office, 3 volumes, 1969. A colossal compilation of testimony and articles (e.g., Fred Hayes on the PPB strategy of the Lindsay Administration; Wildavsky on "Rescuing Policy Analysis from PPBS) that amounts to 1241 pages. Many of the papers were reprinted in Robert H. Haveman and Julius Margolis, Public Expenditures and Policy Analysis, Chicago; Markham, 1970.

Novick, David, (ed.), Program Budgeting. Cambridge: Harvard University Press, 1965. The early conventional wisdom. While still being written, this book was first published by the Government Printing Office in order to provide guidance to agencies during the first year of expansion of PPB to the civilian branches of the Federal Government.

Schultze, Charles L., The Politics and Economics of Public Spending. Washington, D. C.: The Brookings Institution, 1968. Schultze was the Director of the Bureau of the Budget during the Johnson Administration. This book provides an economist's political view of the process of introducing analysis into government decisions.

Methods for Analysis and Planning

Basic Statistics: There are innumerable texts, new and old, that can be used to refresh your fading memories. What they do not do is tell you how to know what numbers you should be looking for. Nevertheless, the great preponderence of program analyses require little more than an adequate background in basic descriptive statistics, regression, and methods of hypothesis testing, together with some knowledge of experimental design and survey methods. Of the current introductory texts, the following are recommended:

Blalock, Hubert M., Social Statistics, New York: McGraw-Hill, 1960.

Davis, James A., Elementary Survey Analysis, Englewood Cliffs, N. J.: Prentice-Hall, 1971.

Systems Analysis and Other Applied Quantitative Methods: Operations researchers have developed a style of attacking problems and a body of analytical techniques that are very powerful for certain classes of problems, especially those involving optimization. Texts are legion. The following is a very good example:

Ackoff, Russell L., and Maurice W. Sasieni, Fundamentals of Operations Research, New York: John Wiley, 1968.

Systems analysis is usually differentiated from operations research by the scale and fuzziness of the problems it tries to deal with. The following books reflect its multifarious origin in general systems theory, engineering of large physical systems, and economics and the problems of choice.

Churchman, C. West, The Systems Approach, New York: Delta, 1968. A non-technical introduction.

Hare, Van Court, Jr., Systems Analysis: A Diagnostic Approach, New York: Harcourt, Brace and World, 1967. Attempts to provide a technical overview based on general systems ideas.

de Neufville, Richard and Joseph H. Stafford, Systems Analysis for Engineers and Managers, New York: McGraw-Hill, 1971. A good example of the blending of approaches from economics, operations research and engineering into a text.

Quade, E. S., and W. I. Boucher (eds.), Systems Analysis and Policy Planning; Applications in Defense, New York: Elsevier, 1968. Systems analysis viewed as a method of problem solving. Examples are defense oriented.

Social Research Methods

Another major group of methodological approaches, heavily focus on survey methods and interpretation. The following provide introductions:

Burton, T. L. and G. E. Cherry, Social Research Techniques for Planners. London: George Allen and Unwin, 1970. Not yet in our library. I have not seen it, but the title is just right.

Hauser, Philip M. (ed.), Handbook for Social Research in Urban Areas. Paris, UNESCO, 1965.

Clinical and Behavioral Science Approaches to Planning

A broad area of great importance to program planning.

Bennis, Warren G., "Theory and Method in Applying Behavioral Science to Planned Organizational Change," in J. R. Lawrence (ed.), Operational Research and The Social Sciences, London: Tavistock, 1966. A really fine compact paper that covers the subject.