DOCUMENT RESUME

ED 201 795 CE 028 780

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TITLE Using Evaluation Results: Guidelines and Practices for Using Vocational Evaluation Effectively. Research and Development Series No. 212.
INSTITUTION Ohio State Univ., Columbus. National Center for Research in Vocational Education.
SPONS AGENCY Saint Paul Public Schools, Minn. Home and Family Living Lab.
BUREAU NO 498MH00012
PUB DATE 81
CONTRACT 300-78-0132
NOTE 94p.; For related documents see CE 018 778-779, ED 185 237-238, and CE 187 428-931.
AVAILABLE FROM National Center Publications, The National Center for Research in Vocational Education, The Ohio State University, 1960 Kenny Rd., Columbus, OH 43210 (ED 212, $6.75; discounts available for quantity orders).

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Annotated Bibliographies; Curriculum Evaluation; Data Analysis; Data Collection; Decision Making; Definitions; Evaluation Methods; Federal Programs; Guidelines; Information Dissemination; *Information Utilization; Innovation; *Program Evaluation; *Research Utilization; School Districts; State Programs; *Vocational Education
IDENTIFIERS Evaluation Problems; *Evaluation Research; *Evaluation Utilization

ABSTRACT

This handbook is designed to help state and local vocational education evaluators and persons using evaluation results by presenting strategies and procedures for improved use of vocational education evaluation results. It is divided into five sections, followed by a glossary and annotated bibliographies. Chapter 1 contains an overview of the issues and a summary of definitions of evaluation utilization. Chapter 2 presents an overview of the programs and trends in utilization, focusing on the federal, state, and local requirements for vocational education evaluation. Chapter 3 contains a discussion of the theory and process of communication, decision making, and innovation as they apply to evaluation utilization. Chapter 4 contains strategies or solutions to various utilization problems encountered by vocational education personnel at all educational levels. It contains an examination of an extensive series of approaches for promoting use of evaluative data and information. Chapter 5 describes related data preparation and presentation strategies and techniques for increasing utilization of evaluation results and further highlights selected key approaches recommended in chapter 4. (A series of related handbooks on vocational education evaluation are available separately through ERIC--see note.) (Author/MN)

Research and Development Series No. 212

USING EVALUATION RESULTS

Guidelines and Practices for Using Vocational Evaluation Effectively

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1981

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FUNDING INFORMATION

Project Title:	National Center for Research in Vocational Education Evaluation and Policy Function
Contract Number:	300 [illegible]
Project Number:	499[illegible]014
Educational Act Under Which the Funds Were Administered:	Education Amendments of 1976 [illegible]2
Source of Contract:	U.S. Department of Education Office of Vocational and Adult Education Washington, D.C.
Contractor:	National Center for Research in Vocational Education The Ohio State University Columbus, Ohio 43210
Executive Director:	Robert E. Taylor
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FOREWORD

This publication is one in a series of National Center for Research in Vocational Education handbooks on vocational education evaluation. A primary purpose for this handbook series is to offer assistance to persons working to increase the quality of vocational education. Reflected in all publications in the handbook series is the intent to advance the theory and practice of evaluation. Specifically, it is hoped that the material presented in this handbook will help provoke, stimulate, and lead the way toward more efficient use of vocational education evaluation results.

This handbook was developed by the Evaluation and Policy Division, the National Center for Research in Vocational Education under a contract with the Office of Vocational and Adult Education, U.S. Department of Education. The National Center is particularly indebted to Stephen J. Franchak, Project Director; Elizabeth Jen, Graduate Research Associate; and Eliseo Ponce, Graduate Research Associate, who had the primary responsibilities for the preparation of this document. Also, recognition and appreciation are extended to Michael H. Kean, Director, Midwestern Regional Office, Educational Testing Service, who contributed an original draft which was used in the development of this handbook. Also, significant contributions to the development of this document were made by other members of the National Center's Evaluation and Policy Division, including: N. L. McCaslin, Associate Director; F. L. McKinney, Program Director; and William Stevenson, Senior Research Specialist.

In addition, the National Center extends its appreciation to the following state and local education personnel who reviewed the draft outline of the handbook: staff members from the Research Coordinating Unit, Alabama Department of Education; Herb Rand and Mark Headrick, Division of Vocational Education, Florida Department of Education; Cheryl A. Rigby and Aaron Gaines, Lively Area Vocational Center, Leon County, Florida; Rose Mary Bengel, Maryland State Department of Education; Florence Sutler, Division of Occupational Education, Planning, Research and Evaluation, New York State Department of Education; Andrea Kelly and Ken Lake, South Carolina Department of Education; Richard Cothran, Greenville County Schools, Greenville, South Carolina; and Steven Bishopp, Commission of Vocational Education, State of Washington.

We are also grateful to the eight members of the National Center's Evaluation Technical Advisory Panel: George C. Copa, University of Minnesota; Toni Hall, Navarro College, Texas; Ruth P. Hughes, Iowa State University; William R. Morris, Chancellor's Office, California Community Colleges; Douglas Patterson, Alabama State Department of Education; Dolores M. Robinson, Florida State University; Robert E. Spillman, Kentucky State Department of Education; and to Tim L. Wentling, University of Illinois. Credit is also given to the following reviewers of the draft copy: Freda M. Holley, Director of the Office of Research and Evaluation, Austin Independent School District; D. Ross Thomson, Associate in Educational Research, Bureau of Occupational Education Evaluation, New York State Department of Education; William L. Hull, Senior Research Specialist, the National Center for Research in Vocational Education, The Ohio State University.

Finally, a special note of appreciation is extended to Sherry White, who had the major secretarial responsibilities for this publication, to Kathy Haycook, Kathleen Medley, and Priscilla Ciulla for their typing assistance, and to Marilyn Orlando who also provided secretarial assistance.

Robert E. Taylor
Executive Director
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in Vocational Education

EXECUTIVE SUMMARY

The effects of the Education Amendments of 1976 on vocational education evaluation practices are beginning to be realized. It appears that more systematic thought is being given to the design and conduct of evaluation activities. However, improvement is needed in many evaluation areas and at all educational levels.

The complex nature of evaluation, the theory, methods and practices, continue to tax those responsible for vocational education evaluation. Moreover, the concerns of Congress and the general public about the lack of evidence of program impact, and equally important the apparent lack of evaluation use for decision making have caused some individuals to give serious thought to the need for emphasis on improving the use of evaluation results. Recent studies of state vocational education evaluation practices reveal that there exists a need to improve formal dissemination and utilization efforts.

This handbook was designed to help state and local vocational education evaluators and persons using evaluation results. Specifically, the handbook provides ideas for increasing the use of evaluation results. We attempted to reduce the current knowledge to the briefest, most practical form in order to guide the reader toward developing strategies and procedures for improved use of vocational education evaluation results. This handbook is organized to serve as a "ready reference" on the subject of utilization of vocational education evaluation results. It is divided into five sections and numerous subsections, followed by a glossary and selected and annotated bibliographies.

Chapter I provides a comprehensive overview of the contents and a summary of definitions of evaluation utilization. Chapter II presents an overview of the progress and trends in evaluation utilization focusing on the federal, state, and local requirements for vocational education evaluation. Chapter III presents information on the theory and process of communication, decision making, and innovation as these factors may apply to evaluation utilization. This discussion focuses on these factors as comprising a conceptual framework for the use of evaluation results. Chapter IV concentrates on solutions to various utilization problems encountered by the vocational education personnel at all educational levels. An extensive series of approaches recommended for promoting the use of evaluative data and information are examined and developed. Chapter V describes selected evaluation data preparation and presentation strategies and techniques for increasing the utilization of evaluation results. It further highlights selected key approaches recommended in Chapter IV.

This handbook also provides a glossary of terms which we consider to reflect the language of evaluation utilization. Many of these terms are adopted from the literature dealing with "Change, Innovation, Dissemination, and Diffusion." In addition, a selected bibliography and an annotated bibliography, containing detailed summaries of major books and reports conducted focusing on evaluation utilization, are presented to stimulate further thought and reading on the subject.

Where appropriate, checklists are provided to encourage the reader to think through various processes or steps in designing or planning for the improvement of evaluation utilization. Also, key references are incorporated to provide the reader with relevant information about major concepts and specific content to make informed decisions about alternative utilization strategies and procedures.

In sum, this handbook presents readers with the kinds of questions they need to ask about the evaluation efforts in order to improve the probabilities of utilization. In particular, it emphasizes their need to see the potential for the use of evaluation results for decision making and vocational education program improvement. We view this handbook as only a beginning, but in undertaking this effort we join a growing number in the field of education who are identifying significant issues bearing on evaluation utilization.

CHAPTER I
INTRODUCTION

Background

The primary purpose of this handbook is to help state and local vocational education personnel responsible for evaluation increase the utilization of evaluation results. With the rapid growth and development of vocation education, the need for evaluation is both urgent and timely. In response to this need, federal funding legislation that includes provisions for funding has given increased priority to evaluation of program quality.

In the past two decades, the practice of evaluation has made rapid gains, having become more systematic and manageable. However, recent studies of evaluation efforts report scant evidence of a component to disseminate data or indicate their use. This deficiency clearly hinders attempts to achieve recognition and acceptance of evaluation efforts.

A major objective of this handbook is to provide practical guidelines, strategies, and procedures that will enable readers to improve their delivery of evaluation findings, and thus increase the probabilities of utilization occurring. Because the dissemination of evaluation data alone seldom fosters change, the handbook focuses on theory and practice directed toward planned change. Research on planned change for vocational education is relatively new, and is considered to be in its beginning stages (Beuke and Farrar 1979). Therefore, many of the strategies and procedures presented here have been derived from other fields, including information sciences, agriculture, and education in general.

Given that the readers understand that the utilization of evaluation is of primary importance; and given that they sense the need to improve and the willingness to improve upon this priority and problem of evaluation utilization, those readers need to ask, "What is this job that needs to be done and what are its objectives and tasks?" Weiss (1980) states that it is important to understand what evaluation utilization means and to understand what it is expected to be used—what knowledge is, and what kinds of knowledge are contributed by research and evaluation (p. 79).

In reviewing the book, *Using Evaluations: Does Evaluation Make A Difference?,* by Alkin et al. (1979), Johnson (1980) states that the authors make the point about the varieties of utilization that can occur; however, he states that it barely makes a start toward providing handy rules of thumb for evaluatiors who wish to be more effective (p. 93). This handbook attempts to address that change.

In summary, some vocational education evaluators may find that this handbook can provide many insights, strategies, and approaches for a wide variety of problems on the use of evaluation results. Also, it can serve as a catalog of available methods and techniques. Thus, it is the intention that this handbook be used as a "ready reference" or decision making companion for improving the use of evaluation results.

Development of the Handbook

Selected consultants, advisory panel members, and state and local practitioners responsible for vocational education evaluation assisted in the formative and summative stages of this handbook. The literature review forms the primary information base for the development of contents. This publication draws extensively from the following works in particular.

Using Evaluations: Does Evaluation Make a Difference? Alkin, Daillak, and White. (1979)

"Utilization of Evaluation Information." Braskamp and Brown. *New Directions for Program Evaluation.* (1980)

Planning for Innovation through Dissemination and Utilization of Knowledge. Havelock. (1969)

A Workbook of Checklists to Accompany the Change Agent's Guide to Innovation in Education. Havelock. (1973)

Research and Development Utilization Strategies and Functions: An Analytical Comparison of Four Systems. Havelock and Lingwood. (1973)

Utilization-focused Evaluation. Patton. (1978)

"Incentives for Innovation in the Public Schools." Pincus. *Review of Educational Research* Vol. 22. No. 1. (1974)

"Utilization of Evaluation: Toward Comparative Study." Weiss. C. H. Weiss, ed. *Evaluating Action Programs: Readings in Social Action and Education.* (1972)

Using Social Research in Public Policy Making. Weiss (ed.) (1977)

Innovations and Organizations. Zaltman, Duncan and Holbek. (1973)

Organization of the Handbook

The handbook is divided into five chapters with numerous sections and subsections. Chapter II reviews federal, state, and local requirements for vocational education evaluation and focuses on utility standards established by the Joint Committee on Standards for Vocational Education. Chapter III highlights theories and processes of communication, decision making, and innovation that influence utilization of evaluation. Chapter IV identifies relevant problems and discusses a variety of approaches recommended to promote utilization, such as identifying an audience, targeting a report, dealing with areas of resistance, and establishing credibility. Chapter V further examines reporting dissemination strategies and presents four scenarios illustrating situations in which utilization has occurred. Both Chapters IV and V are directed primarily to persons conducting evaluations on state and local levels. Readers who wish to become more familiar with the utilization research are encouraged to review the annotated and selected bibliographies.

Definition(s) of Evaluation Utilization

What is evaluation utilization? Evaluators need to have better understanding of what evaluation utilization means, the types of utilization that can occur, and what kinds of knowledge are contributed by evaluation (Weiss 1980, p. 79).

According to Braskamp and Brown (1980),

> One of the earliest and most commonly used definition states that utilization should be measured by the degree to which evaluation has immediate and direct influence resulting in specific decisions regarding program allocations and changes. The impact of the evaluation is obvious, clear, direct and reasonable. If change and innovation do not result, it is implied that utilization did not occur (p. VIII).

More recently, the definition of utilization has taken other forms. "Utilization does not necessarily mean that all of the evaluator's recommendations are implemented immediately, or that all decisions are based directly on the information," Braskamp and Brown explain (p. 91). In fact:

> The evaluation information, for example, may raise larger issues or provide policy changes seemingly unrelated to the evaluation issues. *There may also be a latency period between the end of the evaluation activity and the time when decisions about the program are made. In some instances, an evaluation may serve no role other than a provocative one in which it has no apparent immediate effect but does stimulate interest, raise new issues, and serve as the basis for future evaluation activities* [italics added] (p. 92).

Smith (1980) also distinguishes between the narrow and broad definitions of evaluation utilization. He focuses on the distinction between evaluation use and evaluation impact, indicating that one can occur without the other (pp. 24-25).

Alkin, Daillak, and White (1979) agree that utilization can occur anywhere between two points on a continuum: one point being any time that anyone uses anything from the evaluation for any purpose, the other being when an intended user makes a specific decision immediately following the receipt of an evaluation report and solely based upon the findings of that report (p. 226).

From a local education agency (LEA) perspective, Holley et al. (1979) define utilization within the context of an educational program improvement model. They believe that utilization is one component of a three-component model for educational improvement which involves:

1. choosing an important educational question,
2. designing and conducting a high-quality study that supplies information about that question, and
3. Utilizing those findings in decision making and action relative to improvement in the area in question (p. 2).

They add that utilization does not occur spontaneously upon the completion of an evaluation study. Further, throughout the total process, utilization must have been integral to the thinking of both those conducting the study and those who must eventually use its findings.

Boruch and Cordray (1980) believe that the absence of any uniform definition for "use of evaluation results" underlies some of the argument about whether they are indeed used (p. 61). They offer three broad functional definitions:

1. *Use of information in making specific decisions:*
   This use may involve modifying program operation or regulation, developing legislation, or constructing specific policy.

2. *Use of information to enhance understanding of issues:*
   This use encompasses understanding issues, providing context and background for policy development, and influencing ideas and attitude about a program.

3. *Use of information to persuade others or to confirm one's beliefs:*
   The use of information to persuade others, to argue for program changes and levels of program support, and other related uses of evaluation are common (pp. 6-1, 6-2).

In summary, the number of evaluation utilization definitions offered seem to have common factors. These common factors appear to be captured in the previously mentioned three functional definitions by Boruch and Cordray. It is important that the vocational education evaluators attempt to adopt or adapt such a definition(s). Moreover, it is important that they attempt to arrive at some definition(s) agreement with their clients, such as administrators, program managers, teachers, etc. This is a first step in improving the use of evaluation results.

CHAPTER II
EVALUATION UTILIZATION: PROGRESS AND PROMISE

Background

The 1976 Education Amendments reflected the concern of Congress that there was inadequate information on federal, state, and local fund usage to realize vocational education policy accomplishments (Martin 1978, p. 1). The passage of this legislation provided much impetus for state and local personnel to develop, expand, and redesign their evaluation activities. The enactment of this legislation reinforced the need for more effective planning and more sophisticated means, of collecting and reporting evaluation data. Since then significant strides have been made, but the extent to which all this required activity has been or can be utilized is subject to closer scrutiny.

This chapter begins to address the question by assessing the progress that has been made in view of federal, state, and local requirements for vocational education evaluation. The utility standards established by the Joint Committee on Standards for Education Evaluation are presented with the suggestion that readers recall their own evaluation efforts—either as producers or as users—and determine the extent to which these utility standards were applied. Adherence to these utility standards by vocational education evaluators holds promise for improvement in the use of evaluation results.

Federal Requirements, P. L. 94-482, Sections 107, 108, 112 (1) (b)

The many federal programs instituted to address the human resources problems in the past twenty years face a citizen concern for accountability. Changing social and economic conditions continue to support the need for improved decision making and legislative and policy formulations. Now, more than ever before, elected representatives must be able to argue from a factual base, sometimes in light of awesome technicalities (Zweig 1979, p. 2).

Regulations for the 1976 Education Amendments focus primarily on the evaluation of program quality by requesting data on effectiveness relating to (1) program planning and operational processes, (2) student achievement of competencies, (3) student employment success, and (4) results of additional services for special populations.

State Requirements

State evaluations of vocational education programs have often been described as efforts that are conducted on an informal and unsystematic basis, dependent upon the initiative of local personnel. This has been supported by evidence of both the 1974 General Accounting Office Report and the 1975 Congressional Hearings on the effectiveness of vocational programs.

Most state efforts focus on program review and follow-up components, with little emphasis on the area of student achievement evaluation. Recent studies identify the need for more clearly defined procedures to disseminate evaluation data and promote utilization. It would appear that the evaluation requirements specified in P.L. 94-482 call for resources and expertise which many state staffs do not have.

In response to the 1976 Education Amendments, states are shifting from a decentralized evaluation effort in which the local evaluation agencies (LEAs) and institutional staffs design, implement, and analyze evaluations, to a state-controlled system in which the state evaluation agency (SEA) designs standardized evaluation instruments, delineates evaluation procedures, aggregates and analyzes the data. Although some states will continue to rely on local staffs to conduct actual evaluations, the content of the evaluations will largely be determined at the state level (Smith and Holt 1979).

This shift to state-based evaluations requires efficient data processing and data analysis capabilities at the state level. State Management Information Systems (MIS) which can be considered as an integral part of an evaluation system are relatively uncommon at the present time. This lack of an MIS can contribute to the weakness of the dissemination and utilization component.

Local Requirements

Local evaluation efforts, for the most part, have been initiated because of legislative requirements from both the state and federal levels. A number of exemplary and comprehensive efforts are evident in large city school districts which possess the expertise and resources to support evaluation. For example, the Austin Independent School District, Dallas Independent School District, New York City School District, Philadelphia School District, Portland School District, and the Milwaukee School District have all demonstrated exemplary evaluation efforts. However, each of these school districts has identified a need for improvement in the utilization of evaluation results.

Evaluation Standards

The growing concern of Congress and others with evaluators' ability to determine the effect of multimillion-dollar programs prompted the formation of the Joint Committee on Standards for Educational Evaluation. The committee's work began in the autumn of 1975 for the purpose of providing standards for groups producing and using evaluation reports. Twenty-nine separate standards were identified and defined. These are categorized under four groups: utility, feasibility, propriety, and accuracy.

These standards, which apply to the entire range of tasks in an evaluation, are intended for persons who commission, conduct, or use the results of evaluations. The tasks are defined as contracting, auditing, designing, conducting, analyzing, interpreting, reporting, and using. The focus is on standards for evaluating programs, projects, and materials, rather than institutions, professional personnel, or individual students.

Stufflebeam (1980), chairperson of the Joint Committee, cites utility as the most important evaluation standard. He states that the committee's rationale is self-evident: evaluation should not be done at all (1) if there is no prospect for its being useful to some audience, (2) if it is not feasible to conduct it in political, practical, cost-effectiveness terms, and (3) if evaluators cannot demonstrate that it will be conducted fairly and ethically.

Utility Standards

The utility standards are intended to ensure that an evaluation will serve the practical information needs of given audiences. Stufflebeam (1980) states that they should not be considered as mechanical rules, but rather as guiding principles for evaluators (p. 9).

- *Audience identification.* Audiences involved in or affected by the evaluation should be identified, so that their needs can be addressed.
- *Evaluator credibility.* The persons conducting the evaluation should be both trustworthy and competent to perform the evaluation, so that their findings have maximum credibility and achieve acceptance.
- *Information scope and selection.* Information collected should be of such scope and selected in such ways as to address pertinent questions about the object of the evaluation and be responsive to the needs and interests of specified audiences.
- *Valuational interpretation.* The perspective, procedures, and rationale used to interpret the findings should be carefully described, so that the bases for value judgments are clear.
- *Report clarity.* The evaluation report should describe the object being evaluated and its context, and the purposes, procedures, and findings of the evaluation so that audiences will readily understand what was done, what information was obtained, what conclusions were drawn, and what recommendations were made.
- *Report dissemination.* Evaluation findings should be disseminated to clients and other right-to-know audiences who can best use the report information.
- *Evaluation impact.* Evaluation should be planned and conducted in ways that encourage follow-through by members of the audience (Joint Committee on Educational Standards for Educational Evaluation 1981, p. 54).

Evaluator Credibility and Responsibility

Ultimately, acceptance and utilization of evaluation findings are contingent on the evaluation staff members' ability to get the attention of decision makers and convince them that evaluation results can provide a basis for improved decision making and program improvement. But first, the evaluation staff must be able to translate information from complex data systems into a form understandable and useful to administrators, planners, advisory council members, instructors, and especially students and parents.

Achieving maximum evaluation utilization also involves providing "understandable" decision-making information with implications of alternative interpretations clearly defined. Substantial technical skills are required to interpret quantitative analyses for the various target audiences.

Many evaluators tend to summarize their findings in terms of single choices; for example, in terms of what services are to be delivered to whom by whom. Yet, as Mangum et al. (1979) believe, the reality of political forces and conflicting interest necessitates accommodation and compromise. Choice is often not between a more effective and a less effective program but between one of limited effectiveness and none at all. Although quantitative data may suggest greater returns for one group than another, there may be sound political reasons for preferring the group with the lower cost-benefit evidence. And, possibly, the use of qualitative data can provide evidence to support that alternative decision (see Spirer 1980).

Many would agree that while evaluators must lean, primarily, in the direction of objective and quantifiable bases for decisions, they must also accept the necessary compromises of a political world—unless, of course, these compromises conflict unacceptably with the evaluators' moral values. Krathwohl (1980) states that all of these bases may be said to revolve around two criteria: "that the evaluator has made choices as objectively as possible, that those choices are perceived as representing beneficial prejudice as far as the relevant evaluation audiences are concerned" (p. 25).

It is worthwhile repeating that evaluative analyses must be tailored to the audiences to whom the data and information are to be presented. Presenting evaluative findings to an appropriations committee meeting of a state legislature requires one set of techniques; the techniques appropriate in presenting the same findings to a subcommittee of a state advisory council, which may include academics and knowledgeable program operators, are quite different. Similarly, multivariate analysis results, which may be particularly relevant in explaining the findings from an evaluation of a program involving thousands of students in a large metropolitan area, may be totally inappropriate for explaining the evaluative outcomes for a vocational education program that serves a dozen youth in a rural high school. It is not a difference implied by the knowledge or expertise of the groups addressed; it is simply that complex approaches may not be the most efficient ways of analyzing or presenting findings in all situations. "Evaluation must become a science, but making it useful in a political world is an art" (Mangum et al. 1979).

Summary

Some would say the impetus for evaluation activity at the state and local education levels stems from the need to comply with federal legislations. Others would say that the individual or personal concern for improving what one is doing is the impetus for evaluation activity. If there is an understanding of why the evaluation is done, there is an equal probability for why the evaluation result is or is not used. Boruch and Cordray (1980) state that, in principle, most evaluations are carried out to answer questions dealing with:

(1) who is served by the program and who needs the services

(2) a description of the services—effectiveness of delivery and costs

(3) effects of services on recipients, and

(4) cost benefits of alternatives (p. 2-1).

As difficult as it is to accurately define the why of evaluation, it is equally difficult to accurately define the use of evaluation of results. However, as discussed in the preceding sections, the definition(s) problem, and the extent to which the vocational educational evaluator operationally defines use in collaboration with his client, determine in large measure the extent of evaluation utilization.

Studies undertaken to address use have shown varying degrees of impact. But in most instances evidence of certain factors involved in the evaluation process seem to increase the probability of evaluation utilization.

Obviously serious thought and effort must take place. In part, the advent of the Joint Committee on Standards for Educational Evaluation (1981) proposed "utility standards" holds promise for improvement in the use of evaluation results.

CHAPTER III
COMMUNICATION, DECISION MAKING, INNOVATION: EFFECTS ON EVALUATION UTILIZATION

Background

This chapter presents information on the theory and process of communication, decision making, and innovation as these factors may apply to evaluation utilization. No intent is made to present an exhaustive or all-inclusive review and synthesis and analysis of the literature or practice. The intent, rather, is to highlight concepts relevant to the improvement of evaluation utilization. The references cited in the text and bibliographies of the handbook provide additional sources for a more detailed examination of those factors. The reader is encouraged to refer to those sources for further study.

Specifically, this chapter is intended to increase your awareness of:

- how communication, decision making, and innovation work in relationship to evaluation utilization;
- what effects communication, decision making, and innovation have on the evaluation utilization process;
- what effects communication, decision making, and innovation have on the use of evaluation results.

This chapter also presents a number of utilization ideas. These are intended to focus on some of the many factors which relate to the evaluation utilization effort. In most instances, these utilization ideas complement the material in other chapters of the handbook. The reader is encouraged to pause and reflect on these ideas as they relate to evaluation utilization behavior.

Communication

Communication is frequently defined as a process involving a sender, a message, and a receiver. *Effective* communication is defined as being a two-way communication with a fourth element of feedback. Diekman (1979) makes the distinction between communications per se and effective communications by stating that communication is merely the sending and receiving of both verbal and non-verbal messages, whereas effective communications is productive, helping, and leading (p. 12).

The spoken or written word, aside from numbers and formulas, is by nature inexact and flexible. Chase (1954) views every language as a complex system, with its unique noises and patterns, which addresses three main functions:

1. to communicate with oneself or, as we say, think
2. to communicate with other persons
3. to mold one's whole outlook on life (p. 101)

Failure to achieve effective communication is usually the result of misunderstandings and misinterpretations between individuals and groups. Chase identifies twelve kinds of communication failures that provide important ideas for improving the utilization of evaluation results. These include the following:

- Confusing words with things
- Confusing facts with inferences with value judgments
- Failure to allow for cultural difference
- Failure to appraise the other person's background and point of view
- Failure to appriase motives
- Failure to assemble the main facts before passing judgment
- Failure to check abstract terms with concrete events
- Failure to listen
- Gobbledygook—prolixity and obscurity; using ten words where one would suffice, or drowning meaning in polysyllables or technical terms
- Overgeneralization
- Spurious identification: Newspaper guilt-by-verbal association
- Wholesale application of two-valued logic; black or white, no gray (p. 11-12)

Evaluators should be alert to the possibilities of communication failure as they develop strategies for the collection and publication of evaluation data and information. In sum, a key ingredient is the continual interaction between the vocational education evaluator and the user. The interaction is defined as communication (Holley et al. 1979) or it can take the form of collective bargaining (Krathwohl 1980). In the words of Confucius:

> "If language is not correct, then what is said is not what is meant; if what is said is not what is meant, then what ought to be done remains undone."

Decision Making

It is commonly believed that the evaluator's understanding of the decision making process relating to the project being evaluated has a significant influence on the extent to which the evaluation information is utilized. The decision-making process can be viewed in light of the scientific method (Dewey 1940), problem solving (Ackoff 1979), systems approach, or systems analysis (Churchman 1955, Arnold et al. 1968).

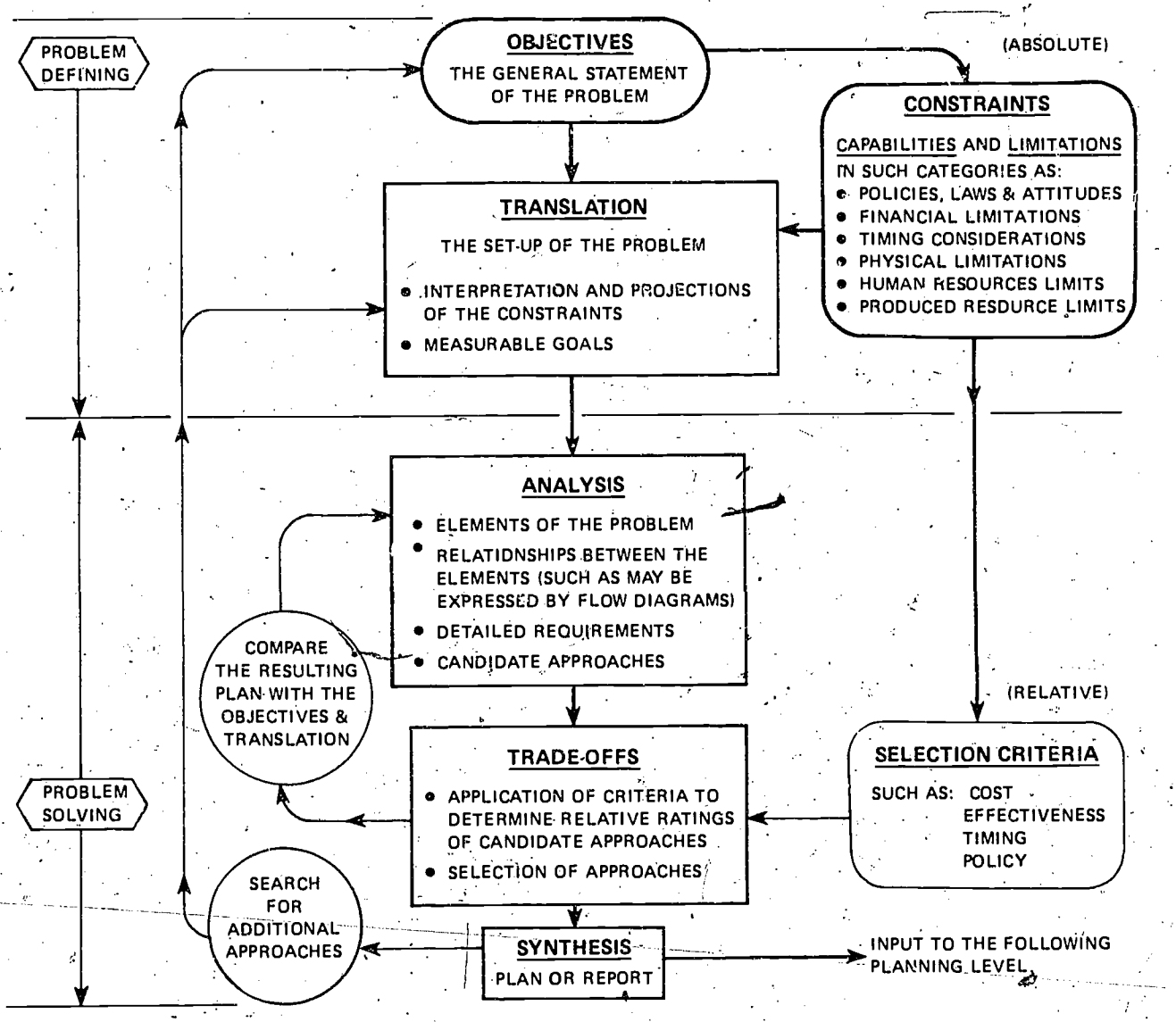
A beginning point in understanding the decision-making process is to define "decision". Souder (1980) believes that a precise definition is very elusive, but offers the following:

> A decision is a very personal thing that occurs internally with each individual. Judgment and intuition are involved, as are sentiments and individual value systems. We never really get to see a decision. We only see its manifestations and effects. We have observed only the elements of a decision process. Elements equal behavior patterns, the analytical procedures and the sequence of logic used in making a decision (p. 12).

The decision-making process involves five stages: (1) identification and proper definition of the problem, (2) specification of alternative courses of action, (3) analysis of the advantages and disadvantages associated with each course of action, (4) the identification of the best solution or the best alternatives, and (5) the follow-up and appraisal of the effectiveness of the decision. Figure 1 portrays one model of a decision-making process.

Figure 1

A Decision Making Process



*Arnold, W. M. *Vocational Technical and Continuing Education in Pennsylvania: A Systems Approach to State-Local Planning.* Harrisburg, PA: Department of Public Instruction and Pennsylvania State Board of Education, 1969, p. 209.

According to Stufflebeam et al. (1972), evaluation is the process of providing information upon which decisions can be made. It follows that in order for evaluators to serve decision makers, they must know first:

- who the decision makers are;
- what decision questions they must answer;
- what decision alternatives are to be considered;
- what cirteria are to be used in judging alternatives;
- projected timing of the steps in the decision process (p. 49).

The Phi Delta Kappa National Study Commission on Evaluation, chaired by Stufflebeam (1971) classified all decisions in terms of whether they pertained to ends, means, intentions, or actualities. Figure 2 presents a conceptual base for the types of decisions which evaluations can influence. In this framework, all educational decisions are classified according to (1) intended ends (planning decisions), (2) intended means (structuring decisions), (3) actual means (implementing decisions), or (4) actual ends (recycling decisions).

In the past, most evaluation efforts in vocational education have concentrated on the decisions as presented in the lower right-hand cell of the matrix presented in Figure 2 (process evaluation). Some statewide evaluation systems, although containing both process and product evaluation, appear to focus more on the process component. Ohio's statewide evaluation system (PRIDE), Illinois' Three Phase System for Statewide Evaluation, and California's Community College Occupational Programs Evaluation System (COPES), are offered as prime examples. Much less attention has been given to the other three cells of the matrix—particularly to the upper right-hand cell (product evaluation). However, recent studies of state evaluation practices reveal increased attention being given efforts toward product evaluation.

Stufflebeam's focus on the importance decision making has in evaluation is largely based on the findings of Braybrooke and Lindbloom in their classic book, *A Strategy of Decision: Policy Evaluation as a Social Process* (1963). "In presenting a strategy of evaluation we shall in fact have to outline a problem-solving or decision making strategy," they state, adding, "We have been setting the stage for a strategy of evaluation that is inseparable from a general strategy for decision-making" (p. 57).

An awareness of the close tie-in evaluation and decision making strategies should enable evaluators to increase the probability of utilization occurring.

It is incumbent upon the evaluator to identify and define, possibly through some systems analysis techniques, the decision-making process within the organization. An excellent model for this process is offered in *Data for Decisions* by H. M. Brickell et al. (1974). They conducted a study designed to identify the many decision makers associated with a federally-funded project, to estimate their relative importance, to isolate the decisions they must make, to determine the information needed to answer the questions generated by the decision situations, to determine how they would rank assorted evaluation reports as to probable usefulness, and to ascertain in what medium and at what length and at what time they would like to have the evaluation reports. This should be done prior to the design of the evaluation and specifically prior to the formulation of evaluation objectives and questions. The chances of evaluation utilization occurring are largely determined by the extent to which evaluator can define the decision-making process. Checklist 1 presented three questions for diagnosis of the decision maker's problem.

Upon defining the process, it is recommended that the evaluator assume the role of the negotiator (Krathwohl 1979). In the scheme of collective bargaining the evaluator must meet with the key actors in the decision-making process and engage in dialogue to determine what evaluation objectives and questions should be identified (p. 29).

FIGURE 2

Typology of Decisions

	INTENDED	ACTUAL
END	*PLANNING DECISIONS* supported by Context Evaluation to determine objectives	*RECYCLING DECISIONS* supported by Product Evaluation to judge and react to attainments
MEANS	*STRUCTURING DECISIONS* supported by Input Evaluation to design procedures	*IMPLEMENTING DECISIONS* supported by Process Evaluation to utilize, control, and refine procedures

Source: Stufflebeam, D. L.; Foley, W. J.; Gephart, W. J.; Guba, E. G.; Hammond, R. J.; Merriman, H. O.; and Provus, M. M. *Educational Evaluation and Decision Making.* Bloomington, IN: Phi Delta Kappa 1971, p. 80.

CHECKLIST 1

Diagnosis of Decision-Makers' Problem*

1. How does the decision-maker initially define the problem?

2. How do you, the evaluator, define the problem?

3. Are there important differences between "a" and "b"?

   ____ No.

   ____ Yes. What are the differences?

* Adapted from *A Workbook of Checklists to Accompany the Change Agent's Guide to Innovation in Education* by R. C. Havelock. Institute for Social Research, University of Michigan, January 1973.

However, identifying the decision makers and, more importantly, the decision-making process within an organization at a state and local level is a difficult task. Guskin (1980) states:

> "Decision makers and those who create knowledge are often not able to relate to each other, and when they do, each has difficulty understanding the world in which the other lives and operates. For while information is an essential resource for decision makers, the manner in which it is converted into policy is based as much or more on interpersonal, organizational, and psychological factors than on the actual information itself" (p. 14).

Innovation

Many critics consider the literature on innovation to be inadequate from a scientific viewpoint. In their work, Beuke and Farrar (1979) cite many references indicating the lack of methodological sophistication and a poor conceptualization of the change process. Fullan (1978) is also critical of the literature, but is optimistic that much of the work is prerequisite to the formulation of an adequate theory which might guide practice.

Probably the most popular and most frequently cited work in the field of education innovation is Havelock. Havelock's (1969) four models of education innovation can provide the evaluator with awareness ideas for improving the probability of evaluation utilization. The four models are (1) Research, Development, and Diffusion Model, (2) Problem-Solving Model, (3) the Social Interaction Model, and (4) Linkage Model.

The *Research, Development, and Diffusion Model* is based on the assumption that agencies outside the system of potential users should develop the innovation products and present the completed package to users, i.e. school administrators, teachers, and so forth. A major criticism of the model is that little attention is focused on the user system.

The *Problem-Solving Model* emphasizes the importance of the user as the primary source of interest in and awareness of the need for change. The potential users, e.g. teachers, are involved in the planning and analysis of needs and identification of problem(s) before the innovation is selected.

The *Social Interaction Model* places emphasis on the external resource as the initiator of the change strategy. The model stresses the influence of opinion leaders. The success of the innovation is based on personal contacts between resources and key users in the user system.

The *Linkage Model* combines elements of the Problem-Solving and Social Interaction Models. Both the user and resource systems unite in close reciprocal communication to diagnose problems and search for solutions.

Beuke and Farrar (1979) point out that these four models of educational change are based on a rationalistic bias of human behavior which assumes educators have clear goals, possess technological sophistication, seek better practices, are able to identify superior products and processes, and are eager and able to adopt proven innovations. However, little evidence exists to support those assumptions.

Strategies for Innovation Implementation

Research and practice reveals that individuals and agencies vary widely in their willingness to adopt new programs or practices (Hull and Bina 1977). A number of strategies suggest ideas for increasing the probability of evaluation utilization. Zaltman, Florio, and Sikorski (1977) defined four strategies: (1) power strategy, (2) re-educative strategy, (3) marketing technology strategy, and (4) manipulative strategy.

The *power strategy* is generally used when the change agent feels voluntary action by the intended adopter or user is unlikely. The success of a power strategy usually rests on the extent to which the sources of power are really valued or compelling.

The *re-educative strategy* rests on two basic assumptions: one, that people are guided by reason, and two, that people will follow their rational best interest when it is revealed to them. This strategy generally requires well-defined, clearly agreed-upon goals.

The *marketing technology strategy* involves identification of marketing opportunities, coordination of the delivery of new products, and feeding market information back into the production activity. This strategy has a primary focus on the users' needs.

The *manipulative strategy* involves persuasion through the presentation of biased information and use of facilitation methods that cause change to be implemented effectively. This strategy, more than any other, requires an in-depth knowledge of the target systems, change agent, and the change itself.

Summary

This chapter presented information on the theories and processes of communication, decision making, and innovation that should be considered in planning to increase the probability of evaluation utilization occurring. The fundamental importance of clear and concise communication, both oral and written, was also emphasized, along with the importance of decision making as the key factor in developing an evaluation strategy. Further, the important role of the decision-making processes in innovation was defined, in view of the fact that decision makers are often faced with choices to innovate or not, to select different innovations, or to use different methods of implementation (Zaltman, Duncan, and Holbek 1973, p. 53).

Within a state or local education environment vocational education evaluators should define or identify those factors associated with the communication process, the decision-making process, and innovation process. Moreover, it can be hypothesized that there exists within each unique environmental setting at either the state or local education agency level a set of utilization factors. And that these factors can be considered as barriers or facilitators for evaluation utilization. With this knowledge available at the design stage of an evaluation and the use of this information in designing the evaluation plan, the probability for maximization of evaluation utilization can be enhanced. Therefore, the analysis of the environment context is considered to be extremely important, and vocational education evaluators must have an understanding of the communication, decision making, and innovation process within their respective state and local education agency.

CHAPTER V
PROMOTING THE UTILIZATION OF EVALUATION DATA

Background

The growing tendency for local education agencies to provide for their own research and evaluation needs is marked by the hundreds of school-based research and evaluation offices already in existence and the sizeable number being planned. With the growth of in-house evaluation services, common problems are more readily observed.

Perhaps the most serious initial problem is one of survival as a viable organizational unit. Survival of LEA-based offices of research and evaluation may well be directly related to their ability to meet their clients' information needs and to communicate data to them in a readily understandable and useful format—a far from easy accomplishment, however.

Failure to communicate evaluation findings and to indicate their use represents, perhaps, the most serious deficiency of attempts by the profession to achieve recognition of the utility of their "products."

The major purpose of this chapter is to concentrate on solutions, not problems. As such, an extensive series of approaches recommended for promoting utilization of evaluation data will be developed and examined. Many of the approaches reinforce the need to adhere to evaluation standards, such as those mentioned in Chapter II.

Underlying these approaches is the assumption that the factors affecting the utilization of evaluation in vocational education are basically the same as for other program areas. Certainly, vocational education evaluation should be treated according to the special needs imposed by the parameters of the program itself. This is not to say, however, that the factors influencing utilization of vocational education evaluation are different from those in other disciplines. It would be particularly unfortunate, because of tradition or governmental mandate, to view the utilization of vocational education evaluations as an automatic process. In a recent report examining state practices and procedures for assessing vocational education programs in light of the 1976 legislation, Smith and Holt (1979) conclude that:

> Lacking from current state evaluation procedures is a formal dissemination and utilization mechanism which specifies how evaluation data are used for program planning and improvement. In fact, the use made of evaluation results is the least documented element of state practices. This may be a result of states' attitude to or perception of evaluation in general and their inexperience in using evaluation data in particular (p. 30).

Utilization Problems and Factors

In her presentation at the second annual Johns Hopkins University National Symposium on Education Research, "O Thou Bringest The Tidings to Lions: Reporting the Findings of Education Evaluations," Lois-Ellen Datta examined three categories of sources in an attempt to demonstrate that little attention is paid to "the evaluation end game." Having reviewed over a hundred books written on evaluation during the past decade, Datta (1979) selected three recent works for comment: *Handbook of Vocational Education Evaluation* by Abramson et al., 1979; *The 1979 Evaluation Studies Review Annual;* and *Evaluating Instructional Programs* by Tuckman. In all three, she observed, "The authors devote considerable space to clarifying objectives for the programs to be evaluated and the purposes of evaluation. Research design receives as many chapters, and measurement, the rest." What is most critical, Datta found, is that communication and utilization of evaluation findings are rarely included as topics.

Datta's overview of selected research reports and a detailed examination of several major case studies including *Data for Decision Makers* by Brickell, Aslanian and Spak (1974), and *Using Evaluations: Does Evaluation Make a Difference?* by Alkin, Daillak and White (1979), produced somewhat richer results. These were classified under four broad categories: (1) the decision maker/decision process, (2) the program social context of the program, (3) the nature of the evaluator, and (4) the evaluation process/evaluation report (Alkin, Daillak, and White 1979, p. 19).

Finally, in an attempt to review "the state of the practice," Data (1979) examined several recent studies: *Evaluation of Vocational Education: Roles, Responsibilities, and Responses of State and Federal Agencies* by the National Center for Research in Vocational Education, 1979; "The Effects of the 1976 Legislation upon State Evaluation," put on by *The Vocational Education Study: The Interim Report,* Henry David, ed., 1980; *State of the Art Review of Vocational Education Evaluation: State Evaluation Procedures and Practices*, by Smith and Holt, 1979; and *A Study of State and Local Compliance and Evaluation Practices: First Draft of Final Report,* by Beuke et al., 1980. This investigation led Datta (1979) to conclude that the most useful information remains to be found out in the field—with the local education agencies—where it is actually occurring, not in publications. A need for further research in this area is obviously indicated.

There are increasing numbers of school-based offices of research and evaluation producing many thousands of research and evaluation reports. The quantity of locally produced reports can easily be verified by examining the annual additions to the various ERIC clearinghouses. Many of the large city school systems (those with enrollments in excess of 45,000 pupils) participate in a group called the Directors of Research and Evaluation (DRE), which also lists a selected sampling of evaluation reports on an annual basis. Over 200 reports were entered in the 1979 American Educational Research Association Division H (School Evaluation and Program Development) Evaluation Awards Competition. Based upon the scant number entered in the category relating to evaluation impact upon board policy development and decisions, however, it is not unreasonable to assume that little is known about the impact of these reports on school district policy.

Why is this so? Why do certain research and evaluation reports affect policy and others do not? Is impact related to the eight factors identified by Alkin, Daillak, and White (1979): (1) pre-existing evaluation boundaries, (2) orientation of users, (3) evaluators' approach, (4) evaluator credibility, (5) organizational factors, (6) extra-organizational factors, (7) information content and reporting, and (8) administrators' styles? Or are the recommendations made by Brickell, Aslanian and Spak (1974): (1) brevity, (2) isolation of technical material, (3) timeliness, (4) nontechnical language, and (5) an illustrated executive summary of the primary factors relating to utilization impact.

Still another approach to viewing the factors related to utilization was developed by Holley (1979). She grouped the factors into six categories, five of which deal with *characteristics* of (1) the program being evaluated, (2) the user, (3) the context (organization), (4) the findings, and (5) the evaluator. The sixth category relates to the resources available to support dissemination and utilization of the evaluation.

As discussed in Chapter III, the importance of defining and understanding the environmental context of the state or local education agency within which the evaluation takes place cannot be overstated. The communication process, the decision-making process, and the innovation process which make up the environmental context, and those factors associated with those processes, are extremely important for improving the utilization of evaluation results. The factors mentioned above are a part of this environmental context, and it is incumbent upon vocational education evaluators to understand this context and make use of this information in the evaluation design. If this is done the probability of increasing usefulness of the evaluation results will be enhanced.

Instead of isolating additional factors or creating a philosophical and theoretical construct on which to hang such factors or variables, the following sections will attempt to identify a series of specific approaches designed to promote the utilization of evaluation data. The approaches are presented as potential solutions to the problem. Checklist 2 is provided for readers to assess their own utilization roles.

Utilization Approaches

Identification of Clients

It is important to single out the specific clients and client groups. This identification should be based on those most closely related to the evaluation and most directly affected by any policy decisions likely to be developed as a result of the evaluation. However, others not closely related should be identified. The expectations of the clients, as well as the type of information and services that they require, are vital considerations in focusing the research and evaluation process. The clients must first be identified before their expectations can be addressed.

A recent National Institute of Education (NIE) study identified thirty-nine different clients and client groups for evaluation studies. These were divided into two categories: direct clientele and indirect clientele. Direct clientele includes those individuals or groups served as the result of organizational intent, hierarchial relationships, and fiscal support, e.g., the superintendent, project directors, principals, or teachers. Generally speaking, these persons have a basic right to receive services.

Indirect clientele includes individuals or groups having an even greater need for services than certain of the direct clientele. They usually request information rather than demand it. Included in this group are members of the community, media, and student body. The requests of indirect clientele may be forwarded through other agencies or individuals who are themselves direct clientele.

Early identification of the evaluation's clients is critical and should take place during the planning phase. Doing so is more likely to produce a better and more acceptable product.

Checklist 3 enumerates certain direct and indirect user groups that vocational education evaluators should consider in developing evaluation plans.

CHECKLIST 2

Preliminary Self-Assessment and

1. The primary utilization role you, the evaluator, follow:

_____

_____

	Good	Adequate	Needs Improvement
Training and experience for role	____	____	____
Formal status in this role	____	____	____
Informal social support and recognition in this role	____	____	____
Feeling of personal competence in this role	____	____	____

What other utilization roles do you adopt at times? _____

Overall feeling of competence in this role _____

Adapted from *A Workbook of Checklists to Accompany the Change Agent's Guide to Innovation in Education* by R. C. Havelock. Institute for Social Research, University of Michigan, January 1973.

Encouraging Active Client Participation in Implementation

It is important to involve as many groups as possible who will ultimately be affected by the evaluation. After all, it is their program. This involvement should be genuine, not mere "window dressing." Though this procedure may lengthen the period of the evaluation, it will pay handsome dividends in the long run.

To do so, of course, assumes prior identification of the evaluation's clients, whose selection requires special emphasis. Clients should participate in a broad variety of evaluation activities:

- Stating program objectives
- Stating questions to be answered
- Determining timing of information
- Designing the reporting format
- Briefings (interior feedback)
- Presenting tentative data
- Reviewing final draft of the report

Guaranteeing Technical Accuracy

The technical aspects of the evaluation—research methodology, measurement techniques, and reporting—must be above reproach. Wherever possible, the evaluation should improve on previous major initiatives in the area, and to this end, the use of multiple measures will greatly enhance the study's technical accuracy.

A single crack in the purity of the methodology and analysis will definitely discredit the entire evaluation effort. It is unnecessary, however, to become trapped into a classical (experimental/control, pre-/postresearch) design. The state of the art in evaluation methodology is now adequate to provide a technically rigorous comprehensive assessment and still focus on specific program objectives. It is also unnecessary and generally inappropriate to select ultrasophisticated statistics if simpler forms of data analysis will provide the same quality of information.

For more information on accuracy standards, see the Joint Committee on Standards for Educational Evaluation (1981, pp. 97-141).

Planning the Sequence and Determining the Frequency of Dissemination

Dissemination of results is, of course, an integral part of the evaluation process, and someone must be charged with the responsibility for overseeing the distribution of reports and scheduling presentations. This dissemination responsibility should be determined in advance. It is the evaluator who will usually disseminate the information to the primary clients. Broader authorization for dissemination may be useful. Sometimes an agreement for funding of dissemination can be worked out prior to the start of the evaluation process.

Planning the sequence, as used here, has a double meaning: (1) serving primary clients first, then secondary clients, (2) establishing the sequence or order of the presentation (e.g., project

CHECKLIST 3

Defining and Ranking Direct and Indirect User Groups

Group Types	Major	Rank Order	Minor	Rank Order	Not Applicable
Agencies					
Comprehensive Employment and Training Act (CETA) Prime Sponsors	☐	___	☐	___	☐
Community-Based Organizations	☐	___	☐	___	☐
County or Intermediate School Units	☐	___	☐	___	☐
Local Advisory Committees	☐	___	☐	___	☐
Local Boards of Education	☐	___	☐	___	☐
Local Business and Industry	☐	___	☐	___	☐
Local Postsecondary Institutions	☐	___	☐	___	☐
National Occupational Information Coordinating Committee (NOICC)	☐	___	☐	___	☐
State Occupational Information Coordinating Committee (SOICC)	☐	___	☐	___	☐
State Department of Education	☐	___	☐	___	☐
State Departments, such as Labor and Commerce	☐	___	☐	___	☐
U.S. Department of Education	☐	___	☐	___	☐
U.S. Departments, such as Labor and Commerce	☐	___	☐	___	☐
Persons					
Administrators	☐	___	☐	___	☐
Current Students	☐	___	☐	___	☐
Former Students	☐	___	☐	___	☐
Student Personnel Services Staff such as Counselors and Job Placement Specialists	☐	___	☐	___	☐
Teachers	☐	___	☐	___	☐
Supervisors	☐	___	☐	___	☐

description, evaluation approach, results, implications). This sequence can be expanded, depending upon the types of audiences to whom the presentation is made. It should be remembered, however, that the findings must be presented first.

Finally, frequency should be considered. Single distribution or several waves of dissemination are possible choices. Multiple presentations (utilizing different forms of the report) are often valuable.

Keying the Results to Timing the Decisions

Timing is all-important if evaluation results are to have a genuine impact on policy. For effective timing, it may be useful to attempt to determine the type of decision expected as a result of the study.

The evaluator should determine the decision cycle in advance. The types of decisions and the key time requirements should also be considered. Allowing sufficient lead time for consideration of the results is important, and meeting deadlines is imperative!

Including an Assessment of Those Objectives Important to Clients

A major aspect of the program planning process is the refinement of program objectives, a process which should be carried out before the program begins, by both the evaluator and program personnel. In this way, the evaluator participates in the development of the program, and carries out activities that anticipate the evaluation. The evaluator should pay particular attention to the objectives from the point of view of their informational value to the decision maker/primary client.

The number of objectives selected should be limited. The evaluator can avoid making a simple project seem too complex by eliminating objectives which may be interesting from an academic standpoint, but which are of little value to the client. It is always wise to emphasize the most important objective when reporting results, regardless of whether the results are positive or negative.

Briefing Decision Makers and Policymakers in Advance

Providing advance briefings to key decision makers and policymakers is of tremendous value. Such briefings should include a nontechnical overview of the specific results of the evaluation, the relationship of those results to the needs of the system, and the specific implications for policy which seem to evolve from the study.

Because evaluation results, no matter how simplified, tend to be threatening (clients often dislike statistics), an advance briefing may prove especially useful in promoting understanding, which in turn leads to acceptance and utilization. As an analogy, consider the British cricket players sitting in Yankee Stadium watching their first baseball game with no prior knowledge of how the game is played. They will naturally rely upon their knowledge of the rules of cricket, and in a very short time become thoroughly confused. If, however, the purpose of the game, its rules, and its system of scoring are explained to them in advance, they will be more likely to understand the game and may actually accept and enjoy it.

The evaluator should use real examples from the project itself in briefing the policymakers. An attempt should be made to stimulate discussion of possible decision/policy alternatives. Simulations of "what if" decisions as well as policy alternatives (e.g., go, no-go, refocus) may also be useful.

Dealing with Areas of Resistance

Change, by nature, is threatening and creates resistance, a fact documented by many studies. Evaluation data are likely to result in one of three possible decisions: go (continue), no-go (stop), and modify. Two of these three decisions imply change, and even if no change is recommended, the very anticipation of it may cause some resistance.

The ability of the evaluation team to anticipate the potential problems created by their work will go a long way toward reducing resistance. Dealing with such points of resistance before they surface will, in the long run, forestall disruptions and increase the changes of translating the evaluation results into practice.

Using an Ombudsperson

Designating a member of the evaluation team as an ombudsperson and a troubleshooter during the implementation of the study will help reduce both resistance and misunderstanding. Such an individual should initiate dialogue with evaluation clients before problems occur and should work with them prior to, during, and after evaluation implementation.

The role of ombudsperson is not common in vocational education; hence, it must be explained to potential users. This person's role is to minimize disruption or problems created by the evaluation effort (or misunderstandings about it), while making the evaluation as unobtrusive as possible.

This role may not be that of a true ombudsperson in the sense that we know the word; however, this individual acts as an advocate for one group (the evaluator or evaluation team), with a view toward serving the needs of another group, the clients. Having a person in this role ensures the ultimate neutrality of the evaluation team in terms of the project's outcomes.

Playing the Entrepreneur's Role

Another factor to be considered as an important correlate of evaluation utilization is the entrepreneurial role, a role played by either the individual responsible for producing the evaluative information or the decision maker ultimately responsible for translating it into policy and using it. If the policymaker exhibits entrepreneurial behavior, the evaluator's role is considerably simplified. Since this is not typically the case, however, it is the potential impact of the researcher's entrepreneurial acumen which will be considered here.

Within the context of economic development, the entrepreneur is an individual who applies a new combination of resources and technology to productive activity in order to effect change. The change which results, however, is rarely only economic, but is social as well; for economic change does not occur without social ramifications. There is a great deal of similarity between the roles and characteristics of the entrepreneur and the change agent. Going by either classification, such an individual has been the key figure in unlocking the doors of development in many of the world's progressive nations.

The entrepreneurial role would seem to be not only appropriate, but extremely useful to assure in working for acceptance of evaluative information, and ultimately for its utilization. In playing the role of the entrepreneur, the evaluator cannot assume a neutral posture but must be, in fact, a strong advocate of the utilization of the information that has been developed. From the beginning, the task must focus on translation of the findings into policy. It is important to remember that advocacy of the utilization of evaluation results need not compromise objectivity in the conduct of the evaluation.

Using an Evaluation Audit

The use of an evaluation audit provides an "outside" second opinion. This practice allows the evaluation to be audited as a company's books are audited by an accounting firm providing a fiscal evaluation of the corporate program. The audit should include several facets of the evaluation: (1) methodology, (2) data analysis, (3) conclusions, and (4) implementation. In a way, the audit represents an evaluation of the evaluation (metaevaluation).

The evaluation audit may be viewed as a validity and reliability check, offering an additional level of confidence to the decision maker. This process also serves as a type of insurance—actually a type of fail-safe mechanism—for the decision maker in the event that the evaluator should somehow fail.

The evaluation audit should be coordinated with the program manager and evaluators and should not be viewed as competitive by the evaluator, but simply as a review and a second opinion.

For further information on the evaluation audit the reader is encouraged to review: *Improving the Accountability of Career Education Programs: Evaluation Guidelines and Checklists* by Adams and Walker (1979, pp. 28-30), and *Evaluation Guidelines and Practices for State Advisory Councils* by Stephens (1980, pp. 13-36).

Establishing the Credentials of the Evaluator

Ensuring credentials should be attended to in advance, whether an evaluation is being conducted by an in-house or outside team. Credentials and back-up support, once established, should result in confidence in the evaluation team members. Confidence in the evaluator is essential to confidence in the evaluation; likewise, confidence in evaluation results is linked to ultimate utilization.

There are a number of means of establishing credentials of the evaluator, including, for example, previous evaluation work, training, and the recommendations of other "clients." Each time an evaluation is completed and the results are satisfactorily utilized, the evaluator's credentials become more firmly established.

Using Key Power Sources Appropriately

The power behind an organization may be different from the primary clientele of the evaluation. Depending on the environmental context of the evaluation, key community power brokers, having little to do with the particular project, may be vital to the ultimate utilization of an evaluation.

These power sources may ask questions such as whether the evaluation results were used, how, why, or why not. Such inquiries may be made in either an official capacity by, for instance, a member of the chamber of commerce education committee, or in an unofficial capacity by the president of a major industry. Such individuals are often professionals or business persons who are accustomed to data-based decision making. If approached properly, they will be supportive of the concept of evaluation and the utilization of its results.

Working with Media Representatives

A good place to begin in establishing relations with the media is to conduct a media seminar. Included in such a seminar may be representatives from television, radio, and newspapers, with the school district's director of information services or public relations. The project director may be involved in the initial briefing, but usually is not. The evaluator and the head of the evaluation office are, of course, pivotal in such a briefing. Two media seminars are recommended, one to set the stage before the results are released, and another at the time the evaluation is made public.

Personal contacts with the media also play a key role. One should always answer all questions but should avoid releasing information to one source and not another. If evaluators cannot answer a question, they should say so, since media persons are likely to recognize bluffing. To "get technical" will usually backfire.

Media representatives, simply by presenting the facts to the public, can be powerful influences in providing for the utilization of evaluation results.

Presenting Evaluation as Part of the Management Support System

Evaluation may be thought of as the process of providing information to be used in decision making. These decisions may be classified in four categories (Stufflebeam 1972): (1) planning decisions that determine objectives, (2) structuring decisions that design procedures, (3) implementing decisions that utilize, control, and refine procedures, and (4) recycling decisions that judge attainments. Clearly, evaluation as a part of the management support system—and the information it provides, whether positive or negative—can be crucial to managing the system.

Positive information resulting from an evaluation would suggest more of the same treatment (either continuing or increasing the project resources) is desirable. Negative information would suggest either adjusting, refocusing, or dropping the program. If vocational education evaluators present information in this context, they should stress that enlightened management demands data-based decision making. This implies, of course, that the client/decision maker will use evaluation results to choose among alternatives.

Increasing the Political Impact of Evaluation Results

The importance of evaluation results is, of course, based almost completely on utilization. However, equal treatment should be accorded all results within the realm of their comparative importance. It is certainly permissible to draw attention to "key" results, if other results are not omitted or hidden and if the importance of the key result is not made to appear more critical than is warranted.

If the evaluation results are politically important, so much the better; for the notion that politics and education do not mix is virtually prehistoric. There is no ethical problem in suggesting the political impact, so long as the validity and credibility of the evaluation are not compromised, and the objectives and the involvement of the evaluation clients have already been identified.

Linking Results to Reduced Costs

The notion of "the politics of less" has become an educational reality. Thus, the linking of evaluation results to measures of cost effectiveness/benefits will heighten interest and improve the chance of utilization. Recommendations should be made with this fact in mind.

Findings which lead to recommendations of high expenditures are virtually certain of rejection. It is often possible to highlight nonresource-intensive findings which can be implemented for little or no cost. When cost savings occur, especially if long-range cost-effectiveness or efficiency is likely, the potential for utilization is greatly enhanced.

Broad Distribution of Findings

Copies of the evaluation results (in various forms) should be distributed to as many different audiences as possible. Remember, utilization need not be a one-time happening. Different clients can utilize different results at different times. Hence, the broader the distribution, the more utilization possible.

The evaluator should target different audiences (as previously mentioned) for evaluation report distribution. One large city Office of Research and Evaluation has identified a list of potential audiences from which to determine dissemination strategies. This list appears as Checklist 4.

Writing a Report

The virtue of brevity should be obvious, but it may be highlighted as follows: The briefer the document reporting results—

- the less threatening it is,
- the more quickly it can be read,
- the more comprehensive it is,
- the less irrelevant material (filler) it contains, and
- the more direct (and apparent) are the recommendations.

Decision makers tend to be busy. They want "short, sweet, and to the point" information. Those formats that require brevity and succinctness of style are fact sheets, abstracts, and summaries.

Emphasizing Nontechnical Aspects of Findings. Rarely do primary clients demand technical detail. Though technical detail must always be available as back-up, it should not permeate the report. Typically, technical detail should be included as an appendix or as a separate volume. The evaluation should include only enough technical information to (1) convince clients that rigorous standards were followed, (2) enable clients to understand the measure(s) used and the relative/comparative importance of the results, and (3) convince clients that they are "technically" justified in making appropriate use of the information. A good substitute for technical information is simple graphics (bar graphs, pie charts, and so forth). Technical terminology in the body of the report should be avoided at all costs. It might be included in a separate, technical volume or appendix.

CHECKLIST 4

Potential Audiences for Developing Dissemination Strategies

	Importance		
	Not Important	Somewhat Important	Very Important
• Local Superintendent	☐	☐	☐
• Superintendent's Cabinet (top administration)	☐	☐	☐
• District Superintendents	☐	☐	☐
• Principals (all or selected according to district, project, personnel level)	☐	☐	☐
• Parents' Council	☐	☐	☐
• Advisory Committee(s)/Task Force(s)	☐	☐	☐
• Program Directors	☐	☐	☐
• Project Managers	☐	☐	☐
• Project Staff	☐	☐	☐
• Supervisors	☐	☐	☐
• Board of Education	☐	☐	☐
• State Department of Education	☐	☐	☐
• National Institute of Education (selected personnel)	☐	☐	☐
• U.S. Department of Education (selected personnel)	☐	☐	☐
• Office of Federal Programs	☐	☐	☐
• Large City Directors of Research and Evaluation	☐	☐	☐
• Libraries	☐	☐	☐
• State Legislators (selected, education committee, local delegation)	☐	☐	☐
• City Council (selected or all education committees)	☐	☐	☐
• Office of Information Services	☐	☐	☐
• Home and School Council (officers, school representatives)	☐	☐	☐
• Local Business and Industry Groups	☐	☐	☐
• Citizens Committee on Public Education	☐	☐	☐
• Current and Former Students	☐	☐	☐
• Parents' Union	☐	☐	☐
• Other Community Groups	☐	☐	☐
• College/University Personnel (selected, regional)	☐	☐	☐
• Other School Districts	☐	☐	☐
• Other Social Service Agencies (public, private)	☐	☐	☐
• Mayor's Office	☐	☐	☐
• Public Media	☐	☐	☐

Keying Language to the Audience. Different audiences may often require different reports, but if this requirement is not feasible, the evaluator should select the lowest common denominator readily acceptable and understood by the largest client group or most important decision makers. The language should always be nontechnical, direct, and authoritative. Although the information may be of tremendous value and of enormous potential utility, if the language fails to communicate it, it may never be utilized.

Establishing Credibility through Review

Three means of establishing the credibility of the evaluation findings are to (1) participate in outside reviews such as federal/state audits, (2) present the findings at a national conference such as AERA (American Educational Research Association) review sessions, and (3) publish the evaluation results in journals, or other periodicals. Each of these methods is a good vehicle, but each creates a time lag. For in-house program evaluators, these may not be feasible.

The local evaluator may wish to consider a review by other selected experts, e.g., a university professor or a school district research and evaluation director. This review should be initiated early in the evaluation process, with final comments made shortly after public release of the report. Schoc district experts may be arranged for on a cooperative basis at little or no cost. Similarly, local univer sity personnel may participate as a public service, or in exchange for cooperative research activities with the school district.

Comparing Similar Studies

The evaluator may consider initiating a search for similar evaluations as early as possible. Possible types of comparative criteria include methodology (approaches), outcomes, and utilization of results. Other studies with similar findings should be emphasized, as should use of the findings.

It may also be possible to link the results to traditional research studies and common-sense conclusions. The more reliable and predictable the results, the greater their perceived validity and the more acceptable they will be to the evaluation clients. The more acceptable the results, the greater their potential for use.

Assessing the Context

Failure to consider special situations can be disastrous. Though the situation may not be controllable, it should be anticipated and cited along with its possible effects. For example, if a school district suffered a teacher strike prior to the implementation of a program, the implementatic of the program would certainly be affected, as would its results. Similarly, any expectation of failure among clients may lead to self-fulfilling prophecy.

The provision of resources is necessary to implement a program according to objectives, as is the cooperation of project personnel in enabling implementation of the evaluation. All such situ- ations such as the Hawthorne effect or the John Henry effect should also be examined.

Summary

Many means of promoting the utilization of evaluation findings have been presented. It should be obvious, however, that each of these approaches requires planning. It is difficult to imagine utilization occurring coincidentally. To help ensure the utilization of evaluation findings, a proactive approach is essential.

Given that the purpose of evaluation is to provide information for decision makers, it is incumbent upon the vocational education evaluators to make this information available. If they fail to do so, then the question arises: Is the evaluation complete?

CHAPTER V
PREPARING AND REPORTING EVALUATION RESULTS

Background

The evaluation components for most state and local education agencies include (1) program planning and operational processes, (2) student achievement, and (3) student employment success, and (4) requirements for special populations. Procedures for collecting and processing the data have improved substantially since specific evaluation requirements were defined in the federal Vocational Education Act of 1963, especially with increased use of management information systems (MIS). The computerized MIS in some state and local education agencies provide numerous computer printouts revealing statistics on program enrollments, student achievement, and student employment success. However, some of this valuable information, once it has been processed and reported, is never used again.

Evaluators, meanwhile, accuse decision makers of ignoring the data and information. Decision makers complain because the data and information are voluminous, not specific, and difficult to read and understand. It follows that evaluators need to assess their performance in the area of preparing and reporting evaluation results.

This section provides a more detailed discussion on those factors considered to be critical for the preparation of the evaluation report. The section builds upon the ideas presented in Chapter IV.

Specifically, this chapter describes types of evaluative data and presents specific recommendations for preparing reports, packaging information, and disseminating evaluation findings in order to increase utilization. The focus is on one evaluation component, student employment success. Emphasis is given to those data relating to product evaluation, and specifically, the recycling decisions as defined in Chapter III. Checklist 5 asks readers to identify those strategies they employ for utilization purposes.

Data Analysis

Data analysis, commonly defined, is the tabulation, organization, and summarization of the raw information collected during the evaluation. The analysis should relate data to the evaluation questions of the study, shape it into some usable form, and determine through the use of an appropriate statistical model or "practical/nonmathematical model" if the findings are significant or due to chance variation.

Based on the evaluation goals as they relate to the decision-making structure and decision makers, plans should have been made to test specific hypotheses or answer specific questions, and collect the data needed. Fitting quantitative data to a statistical model or fitting qualitative data to a nonstatistical model directs the evaluators' attention to certain aspects of the data and suggests inferences which may be made. This model should be made explicit and its use should be justified

CHECKLIST 5

Strategies for Improving the Utilization of Evaluation Results

	Yes	No
• Identifying key decision makers	☐	☐
• Establishing utilization goals and objectives	☐	☐
• Creating a follow-up and follow-through utilization plan	☐	☐
• Providing technical assistance	☐	☐
• Monitoring activities to affect use	☐	☐

by its relationship to the decision-making structure, evaluation goals, and nature of data collected. The analysis may be invalid if—

1. relationships are not recognized in the choice of analytical methods models (quantitative, qualitative);
2. data aggregation levels are not appropriate;
3. assumptions for employing analytical methods or models are not satisfied.

Data and Information Presentation

It is important to note the distinction between data and information:

> *Information comes from data, which are logical presentations of measurements, observations, and computations.* Logical is here defined as orderly, intelligible, objective, and capable of forming accurate relationships based on principles and rules of reason (Mercer and Koester 1978, p. 85). [italics added].

Not all data contain information capable of being assigned a useful meaning.

Assigning meaning to data consists of taking the information resulting from the data analysis process and subjecting it to expert scrutiny. Such an examination should explain the meaning of the displayed information in terms that are comprehensible to decision makers and other information users. These assigned meanings are useful for accountability, policymaking, and program improvement.

For example, the interpretation of analyzed data on student employment success can best be performed by the professional staff, the evaluators, or data analyst. However, top managers in the organization at either the state or local levels must feel comfortable with the fact that these individual organizations at either the state or local levels are acquainted with vocational programs, are credible and competent evaluators familiar with problems facing the managers, and have a deep concern for the target audiences they are serving. Equally important to this process is the need for the evaluator or data analyst to view these data as integral elements of a comprehensive management information system (MIS).

Moreover, these data need to be considered as only one element of information contained in a MIS. For example, a preliminary step in organizing the data interpretation and presentation function of the MIS is deciding what client format is appropriate. This could take the form of a cross-tabulation such as program area by function (i.e., personnel development, teacher inservice, curriculum development, and so forth), by a combination of areas and functions, or by any other grouping that facilitates the needs of a specific education agency—state (SEA) or local (LEA).

State and local education agencies may present employment success in a variety of forms, depending upon the target users, such as the following: (1) the general public, (2) education planners, (3) educational administrators, (4) board of education members, and (5) program advisory committees.

Each of these audiences has different needs. The general public does not usually require a detailed report. A one-to-three page report highlighting the results of the assessment of the former students' satisfaction with their training and job may be sufficient. Educational administrators and

the advisory council for vocational education may be interested only in a one-page executive summary and a list of conclusions and recommendations. In contrast, educational planners, classroom instructors, and placement personnel may need a detailed "technical" report to enable them to recommend or develop specific strategies for program changes. State administrators and planners may want to review final reports prepared for federal officials.

The interpretation of the evaluation data in the oral and written reports is important. Careful attention is required to assure that the evaluation reports are not misleading. Many users will judge the entire study effort on the basis of the final report. If it is not clear and complete or does not reflect all of the findings and limitations of the evaluation, the information may be ignored or misused. There is no guarantee that evaluation results will not be misused. However, full and open disclosure can help to assure that findings are not misunderstood. In sum, the evaluation report should be sufficiently clear to the audience in its description of goals, procedures, and findings about what was done, why it was done, and what was learned.

Reporting Recommendations

A common mistake in reporting on the assessment of former vocational students' employment success is to distribute the same report to all audiences. As discussed in Chapter IV, evaluators must identify the audiences whom the report is intended to serve and for what purpose—accountability, decision making, or program improvement. It is not uncommon for an LEA or an SEA to distribute hundreds of final report copies of fifty or more pages. This practice is not only costly but also of questionable value. The general public needs straightforward summary information, not technical "trivia" or sheer mass. The administrator who has neither the time nor the technical expertise to review the entire contents to recommend policy action or determine program decisions may never read it. Only the educational planner, classroom/laboratory instructor, counselor/placement personnel may need to know all the detailed information. Thus, an important consideration in the strategies for presentation and utilization is the *length* of the report. In a study to determine appropriate reporting formats for educational decision makers, Brickell states:

> Top officials and management staff were more likely to ask for short report; program and project specialists were more likely to request medium or long report in their areas of specialization (p. 99).

As a rule of thumb, short reports average one page, three minutes reading time; medium reports, ten pages, fifteen minutes; and long reports, one hundred pages, sixty minutes (Brickell 1974, p. 99).

The alternative reports on student employment success must be weighed in terms of the targeted reading audience. At the state level, all three reports—short, medium, and long—should be prepared. If the state conducts the assessment of student employment success of former students or a sample of the total population, it seems advisable that it also prepare statistical reports for each of the LEAs. At the local level, the detailed report and the executive summary should be minimum requirements.

Graphic Presentations

Graphic presentations are an extremely useful and efficient medium for the presentation of quantitative data in a manner which facilitates the comparison of values, trends, and relationships. Graphic displays have qualities and values lacking in a narrative presentation:

1. They are more effective in creating interest and catching the attention of the reader.

2. They provide visual relationships which are more clearly grasped and more easily remembered.

3. They are more time efficient, since the essential meaning of large masses of statistical data can be assimilated at a glance.

4. They provide a more comprehensive picture of the problem, making for a more complete and better balanced understanding.

5. They stimulate and facilitate analytical thinking and investigation which bring out hidden facts and relationships.

Graphic presentations may take any of the following forms:

1. *Rectilinear coordinate charts* — The most frequently used of this type is the simple, arithmetic line chart. A number of useful variations exist; the cumulative curve chart, staircase curve chart, simple-surface or silhouette chart, staircase surface chart, multiple-surface or band chart, and the 100 percent surface chart.

2. *Bar and column charts* — The major use of these forms is to facilitate the visual comparison of the magnitude of coordinate items or parts of a total. The bars in a bar chart are arranged vertically in a column chart. Basically, there are at least eight types of bar charts: the simple bar chart, the bar-and-symbol chart, the subdivided-bar chart, the subdivided 100 percent bar chart, the grouped-bar chart, the paired-bar chart, the deviation-bar chart, and the sliding-bar chart.

   There are also eight basic types of column charts: simple column charts, connected-column charts, grouped-column charts, subdivided-column charts, net-deviation column charts, gross-deviation column charts, floating-column charts, and range charts.

3. *Semilogarithmic or ratio charts* — This type of chart is especially suitable for showing proportional and percentage relationships. It is a good method for portraying rates of change in a graphic way. This type of chart not only correctly represents relative changes, but also indicates absolute amounts at the same time. The vertical axis is ruled logarithmically, and the horizontal axis, arithmetically. The continued narrowing of the spacings of the scale divisions on the vertical axis is characteristic of logarithmic ruling. On the other hand, the equal intervals on the horizontal axis are indicative of arithmetic ruling. This chart is also sometimes referred to as a ratio chart because of the proportional relationships which it portrays.

4. *Frequency graphs and related charts* — There are three basic types of simple frequency graphs: frequency polygon, histogram, and smoothed frequency curve. The cumulative-frequency graph or ogive is well suited to the following purposes: (a) to determine and show the number or proportion of cases above or below a given value, and (b) to compare two or more frequency distributions.

   Probability graphs are based on the normal frequency curve. This method provides a test for proportional asymmetry as well as demonstrating comparisons between empirical and theoretical distributions and prediction.

5. *Miscellaneous graphic forms* — The pie chart may be used to show component relations. The various segments of a circle represent component parts of the total. The trilinear chart simultaneously portrays three variables in the form of elements of a single function of activity. It is always a 100 percent chart, since the sum of the

three values indicated is equal to 100 percent. Trilinear charts are especially useful in portraying operating, production, or other costs expressed by a threefold breakdown.

The scatter diagram (scattergram) and other types of correlation charts show in graphic form the degree and type of relationship or covariation between two series of data. In statistical terms, the relationship between two or more variables is described as correlation. The fan chart portrays change for two different periods either by percentages or index numbers. As many as ten or fifteen items may be shown, depending on the range and scatter of values.

Ranking or rating charts place emphasis on the position of certain items or categories. This position is usually based on magnitude or frequency. Therefore, emphasis is placed on rank-order position, rather than on the values themselves.

The most effective way of showing spatial relationships is the map. Maps are often helpful in locating problems, testing hypotheses, analyzing data, and discovering hidden facts and relationships. The following basic types of maps may be useful in portraying statistical data: (a) cross hatched or shaded maps, (b) spot or point-symbol maps, (c) isoline maps, (d) maps with one or more types of graphs superimposed, and (e) a combination of two or more of the preceding types.

Pictorial graphs and charts may be used with popular reports which are prepared for nontechnical use. They add interest for the reader who may not be otherwise motivated to look at the item. Charts drawn in projection have limited use in vocational information packaging, largely because of the complexity involved in designing three-dimensional pictorial graphic forms which are distortion-free.

This is a very brief outline of some graphic forms which vocational education evaluators may consider for reporting evaluation results. The reader is referred to figures 3 through 9 for selected ideas for developing graphic displays. A more detailed description about each specific type with numerous examples may be found by consulting the following references:

AT&T. *Making the Most of Charts: An ABC of Graphic Presentation.* Washington, D.C.: Navy Publications and Printing Service, November 1970.

Schmid, C.F., and Schmid, S.E. *Handbook of Graphic Presentation.* New York: John Wiley and Sons, Inc., 1974.

Starr, H. et al. *Selecting, Analyzing, and Displaying Planning Information.* Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University, 1979.

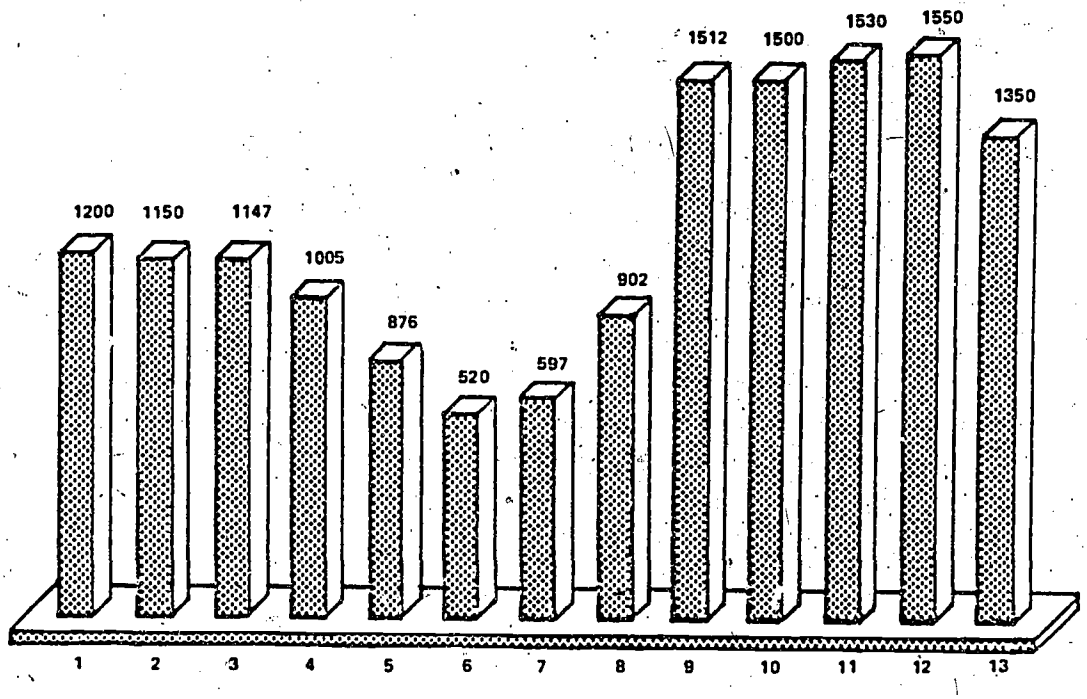
A thorough discussion of technical strategies and techniques to aid evaluators in communicating their evaluation results is found in the publication, *A Communication Handbook for Researchers and Evaluators* by Holley et al. (1979).

Preparing the Content and Information Packaging

Information about vocational programs is generally prepared for one of three types of functions: (1) public information/relations, (2) administrative decision making, and (3) program decision making. Each requires a different strategy for content development and style of packaging. Under normal circumstances, it is not advisable to photocopy the computer-generated printouts for distribution. The three types of functions for which information is prepared and packaged are treated separately in the following discussion.

FIGURE 3

(Three-Dimensional Bar Chart)
TOTAL ENROLLMENTS BY PROGRAM, 19–/19–



Vocational Program Code:

1 Plastics Technician
2 Horticulture Production
3 Livestock Management
4 Fashion Retailing
5 Insurance
6 Marketing
7 Accounting
8 Quantity Food Preparation
9 Auto Mechanics
10 Practical Nursing
11 Data Processing (keypunch)
12 Cosmetology
13 Interior Design

FIGURE 4

(Line Graph)

10TH-12TH GRADE ENROLLMENTS BY PROGRAM, 19–/19–

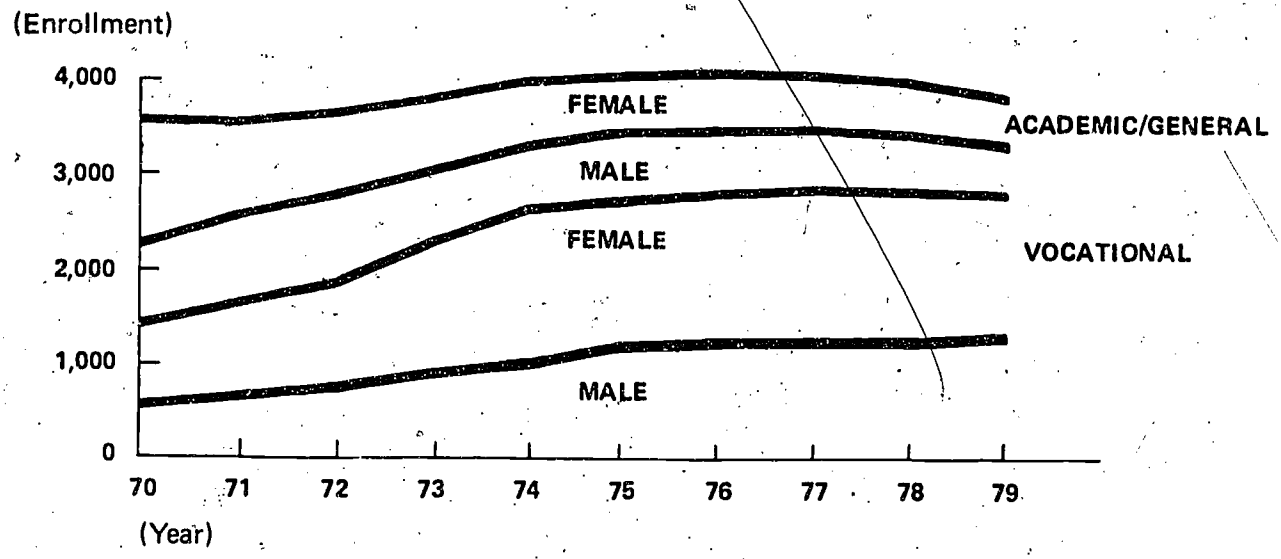


FIGURE 5

(Bar or Column Chart)

MONTHLY SALARY OF EMPLOYED VOCATIONAL PROGRAM GRADUATES

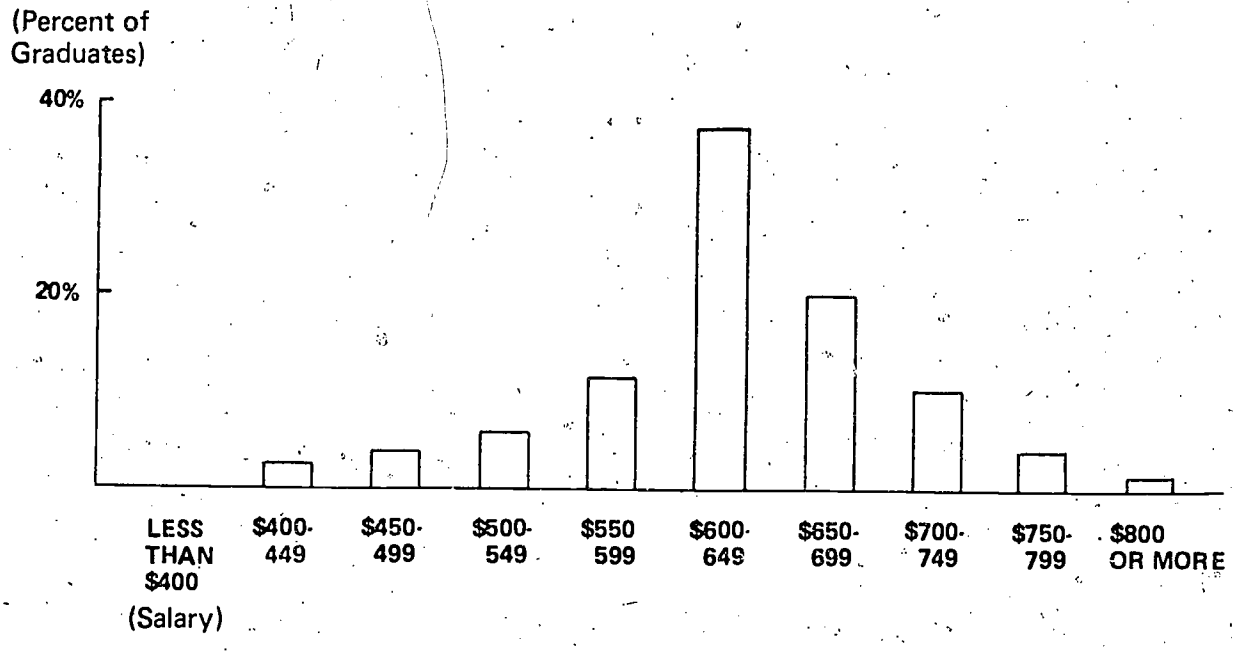


FIGURE 6

(Bar Chart)

19— GRADUATE
FOLLOW-UP RETURNS BY PROGRAM AND SEX

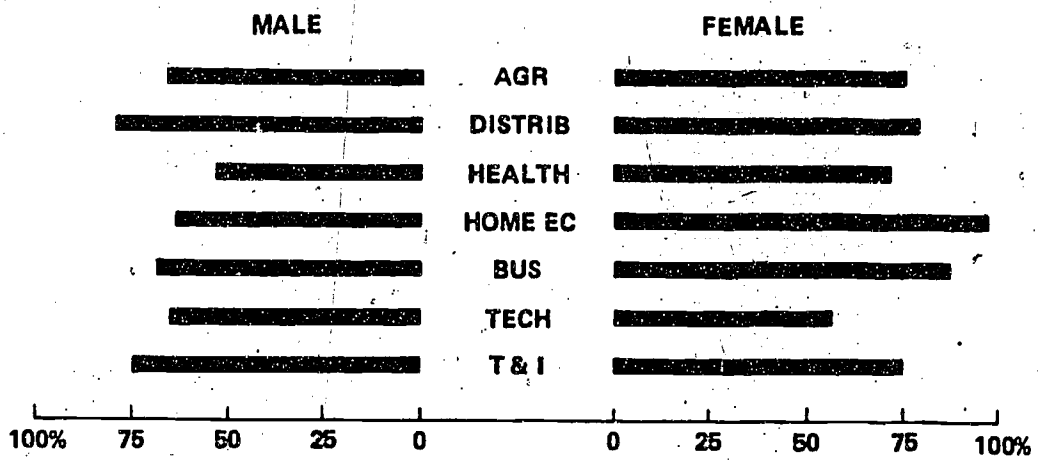


FIGURE 7

(Column Chart)

19— GRADUATES BY VOCATIONAL PROGRAM AND SEX

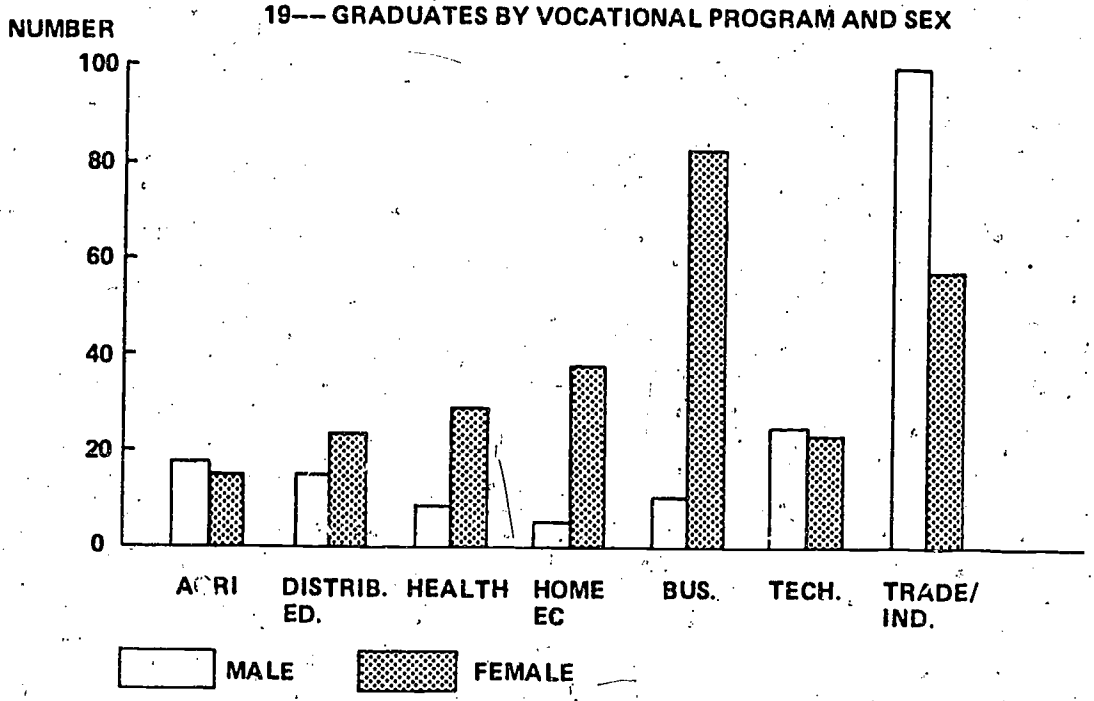
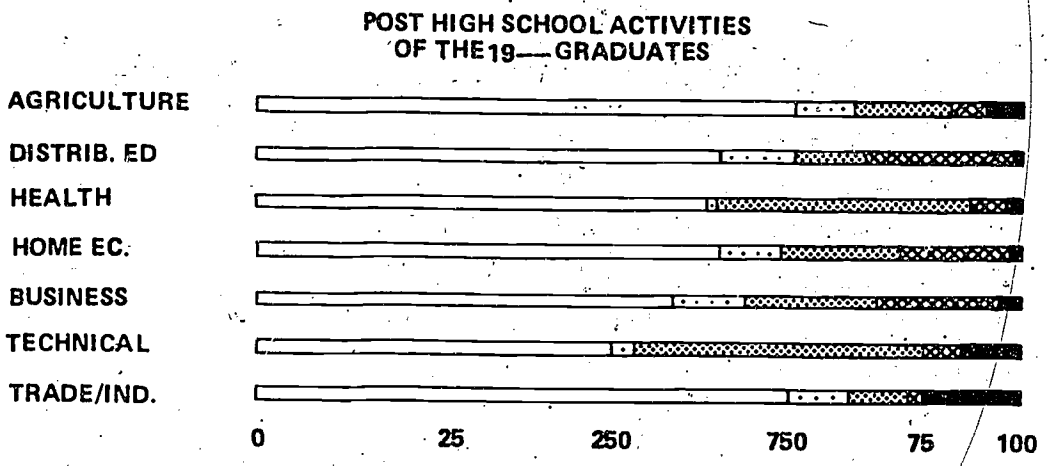
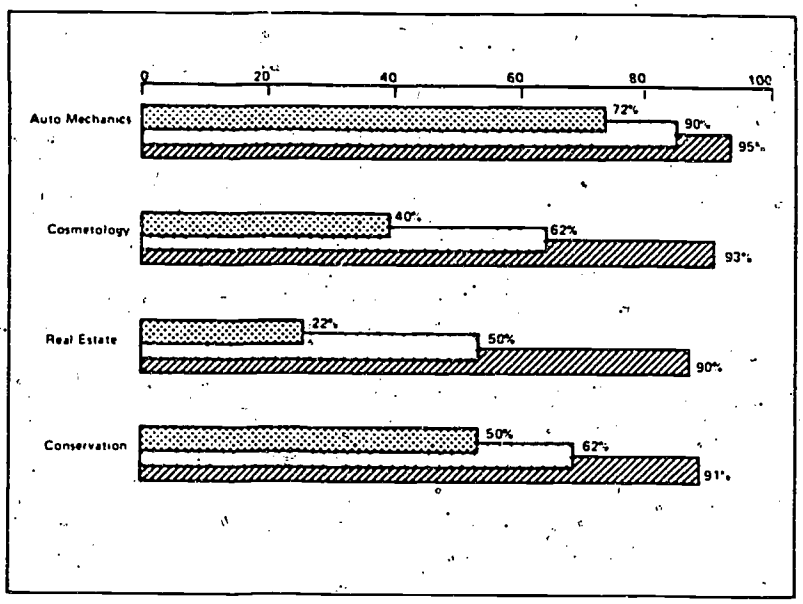


FIGURE 8

(Bar Chart—Shading)



(Overlapped Bar Chart)



EMPLOYED

IN SCHOOL/ COLLEGE

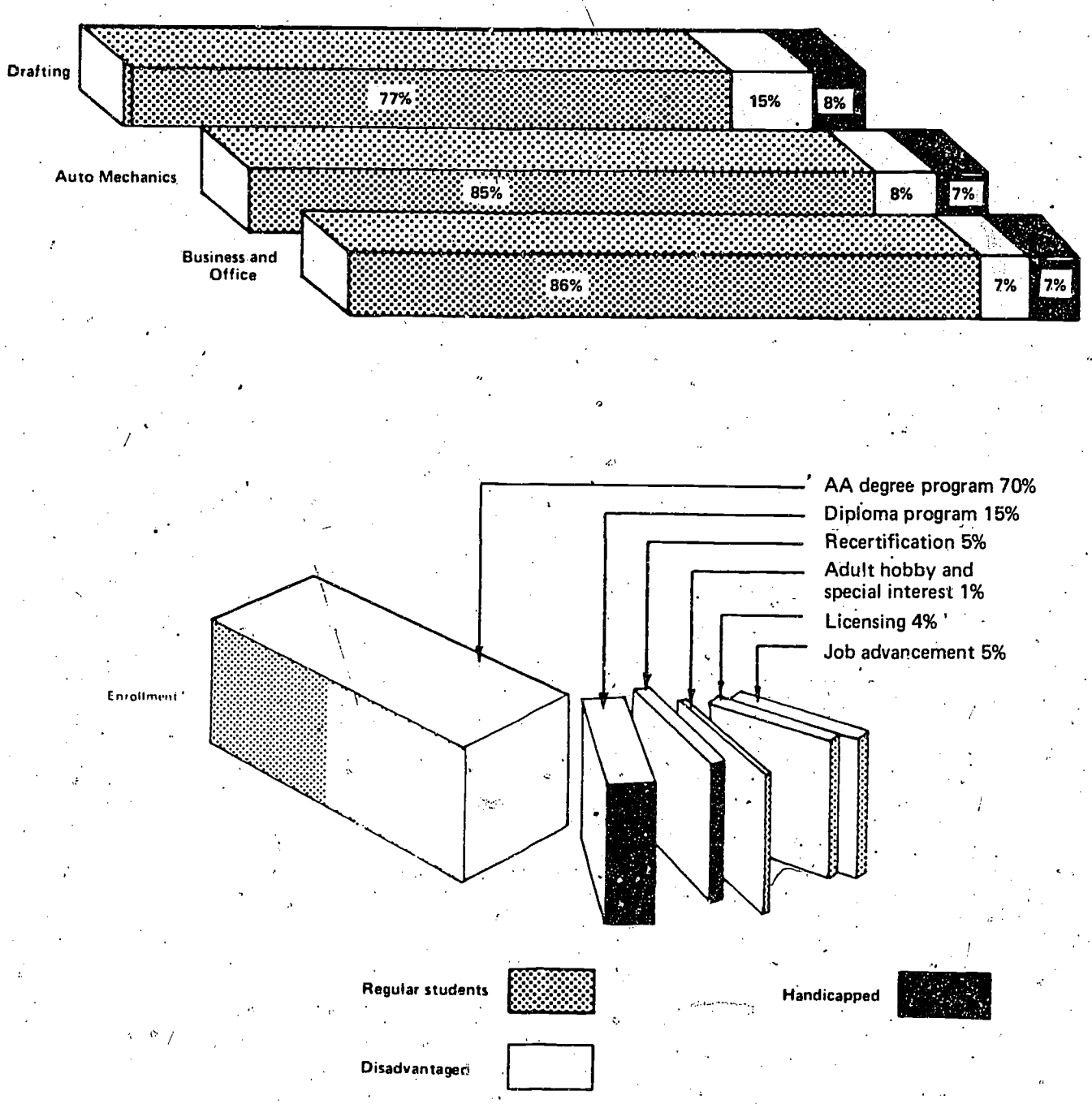
UNEMPLOYED

NOT IN LABOR FORCE

IN THE MILITARY

FIGURE 9

(Three-Dimensional Bar Design)
STUDENT ENROLLMENT BY PROGRAM BY COURSE



Public Information/Relations

This function is one of keeping the general public informed about the needs and achievements of vocational education. The information must be packaged in as simple and efficient a way as possible. Very elementary visual displays such as charts and graphs are highly recommended.

> Whether graphic or tabular techniques are used, three factors underlie satisfactory display of quantitative data: simplicity, clarity, and effectiveness. The graphic and tabular forms of data display must be easily read and understood, and must be presented in a manner which will facilitate ease of comprehension and retention. These purposes require consideration of: (a) the nature of the data; (b) the purpose of the display; (c) the medium for presenting the data; and (d) the audiences to whom the data are presented. One or all of these factors may be pertinent to any situation where data are presented or displayed (Starr et al. 1979, p. 61).

When the visual display is complete, it should be examined critically in light of the following questions:

1. Does it convey the intended message?
2. Does it display the relationship clearly?
3. Can it be displayed differently?
4. Does it have eye appeal?

Although these are basic requirements, more often than not individuals who package information fail to address them and thus run the high risk of failing to communicate effectively to the intended audience—the public.

Administrative Decision Making

Contrary to popular belief, decision makers are generally not voracious report readers. Many simply do not have the time to do extensive reading and analysis. Because decision makers tend to be oriented more toward oral communication, it would obviously be a waste of time and effort to provide them with extensive sets of unsynthesized data, expecting them to do their own analysis of outcomes relating to problems they are trying to solve. Decision-making information offered to managers should be synthesized and packaged into a very practical, usable, "palatable" form. Charts and tables of data need to be clear and concise for immediate understanding.

A great deal of responsibility rests on the evaluator or data analyst who must interpret and package the information for dissemination.

Program Decision Making

Clients involved in program development at either the state or local level should receive the detailed report and the executive summary. The raw data and processed information may also be prepared for individual institutions and agencies.

Care must be taken to maintain confidentiality of data and information. Schools should of course receive all information and data recorded about their own programs, as well as summary data for the LEA and region as a whole. In sharing such detailed data/information from individual schools with other schools, consideration must be given to the federal legislation requirements for the confidentiality and protection of individual rights.

Factors to Consider in Increasing the Use of Information

The development of working relationships, both within the organization and among members of different organizations, is extremely important. One important internal working relationship is the linking of evaluation information with people involved in planning, programming, operations, and compliance. Here, the development of a conceptual framework is extremely important. This involves the development of tactics, strategies, and procedures.

A fundamental question for school improvement is, how does change take place? One can posit that it takes place in part through the use of existing systems. Another way is through a reordering of priorities.

Who are the key actors in this change or use process? Linkers and change agents are among those most commonly defined as such. Many linkers and change agents already exist in schools, e.g., teachers and curriculum coordinators. The problem is that those individuals do not visualize their potential for the role. The challenge then is to adjust their focus on problems concerned with change or evaluation use—for example, allocating resources, developing communication skills, and implementing diagnostic procedures.

The importance of having clients participate in the design of an evaluation use plan cannot be overstated. Meaningful collaboration—working within an existing network or developing new networks—is essential.

Effective linking of developers, users, and evaluators begins with an awareness of what information systems do exist, either formally or informally. Serious consideration should also be given to using cost-effective communications technology, such as the electronic newsletter.

User-Oriented Mode

Another suggestion for increasing the use of evaluation data and information is to follow a user-oriented mode rather than a product-oriented mode. Again, plans should offer efficient service at a reasonable cost. A number of strategies are available for the evaluator. With regard to efficiency in a people-oriented mode, the telephone as a medium for delivery can increase the probability of utilization. Another important strategy is to make initial contact and serve people with enthusiasm. Also, one must take into consideration the differences that exist among local school needs, state education agency needs, and individual needs. In all cases, the information should be made available in a timely manner. The development of a network of coordinators can be a most cost-efficient method for transmitting evaluation data and information. The ombudsperson, as mentioned in the previous chapter, can serve as a key to this network concept. This reduces the number of direct contact points for the evaluator, and allows for the network to serve as a multiplier in dissemination. Other modes of communication which the evaluator can and should use are the news media, conferences, newsletters, and meetings with college and inservice classes.

Effective dissemination and use of evaluation results seldom, if ever, occur by accident. They must be planned. Hull and McCaslin (1977) offer thirty implementation techniques that represent tools which may be used to influence people toward implementing innovations. A number of those techniques can be considered by the vocational education evaluator for enhancing the use of evaluation results. For example, an evaluator should establish an evaluation utilization council composed

of teachers, program supervisors, teacher educators, parents, students, employers, and state education officials. This council can serve as a sounding board to review and advise on the packaging and dissemination of the evaluation results. There needs to be an effective delivery of usable information, and a significant effort must be made by the evaluator in focusing on the attitudes of potential users. Checklist 6 presents ideas for organizing the evaluation council.

Strategies and procedures for the use of evaluation must be targeted on the user groups. The evaluator needs to describe the potential use of evaluation results to individuals and groups. Specifically the decision setting(s) and decision type(s) of client groups such as students, teachers, administrators, and legislators must be analyzed individually or collectively. The analysis should focus on their use requirements in regard to program planning and operational processes, student achievement, and student employment success. In sum, a number of factors or conditions exist that contribute to the utilization of evaluation results. But it is the preparation and reporting—as one might say, the "summative activity"—which often determine whether or not utilization occurs. Checklist 7 is presented for readers to rate these and other factors in order of importance.

Scenarios of Evaluation Utilization

There are innumerable variables associated with the decision making process which affect the complex nature of vocational education change. The utilization of evaluation results for effecting change is merely one segment of the total process of change, but should never be underestimated as a critical component.

The following scenarios depict instances where evaluation results were employed in the decision making process. In each scenario an evaluator is speaking. These examples were adapted from Weiss 1977, Patton et al. 1978, Alkin, Daillak, and White 1979, and Franchak and Spirer 1978.

Scenario 1

Annual vocational education graduates' employer surveys in a large school district revealed that graduates lack essential employability skills. A closer look indicated that some students did not know how to properly fill out an employment application, how to conduct themselves in a job interview, or how to keep a job once they found one.

The vocational education director, other administrators, and occupational specialists met and formulated a plan to better prepare students for entering the job market. In several large high schools, separate courses on "employability skills" is now offered on the ninth- or tenth-grade level. Furthermore, every high school, regardless of size, has instituted a unit of employability skills in certain academic and all vocational classes. These units are taught by either occupational specialists and vocational teachers, depending upon the situation. The program has met with favorable comments from employers and students, and recent survey data have tended to substantiate the changes.

Scenario 2

Employer surveys from a small community college revealed that some graduates of business programs were failing to meet the minimum typing performance standards required in certain occupations. The head of the business department checked all typing programs and noted that procedures for testing typing speed and accuracy were not consistent with those used in business and industry.

CHECKLIST 6

Organizing the Evaluation Utilization Team*

1. Organizing the Utilization Team

Other persons you know who might work in utilization roles with respect to this client system.

	Outsiders	Insiders	Estimate of need for this type of utilization role in this evaluation effort		
As Catalysts			Hi	Med	Lo
As Process Helpers			Hi	Med	Lo
As Solution Givers			Hi	Med	Lo
As Resource Linkers			Hi	Med	Lo

2. Who are the members of the utilization team?

	Person	Primary Skills or Contributions to Evaluation Effort
Insiders		
Outsiders		

a. How good is the collaboration within the team?

b. Do you confer frequently?

c. Do you share goals and values?

d. Do you have a common plan?

e. Do you divide up the labor rationally according to your evaluation skills?

*Adapted from *A Workbook of Checklists to Accompany the Change Agent's Guide to Innovation in Education* by R. C. Havelock. Institute for Social Research, University of Michigan, January, 1973, pp. 3–4.

CHECKLIST 7

Factors and Conditions that Contribute to the Utilization of Evaluation Results

Factors and Conditions	Rating of Importance				
	Very Important	Somewhat Important	Not too Important	Not Important At All	Don't Know
1. Prespecification of goals and objectives	1	2	3	4	5
2. Identification of decision makers	1	2	3	4	5
3. Understanding of the decision making communication, and innovation processes	1	2	3	4	5
4. Identification of informational require-requirements relevant to decisio	1	2	3	4	5
5. Evaluation report provides clear direction for future planning	1	2	3	4	5
6. Evaluation results support the decision makers' ideology	1	2	3	4	5
7. Evaluation results suggest little or no change	1	2	3	4	5
8. Evaluator assumes active role in promoting utilization	1	2	3	4	5
9. Presence of a formalized evaluation system	1	2	3	4	5
10. Standardized tests matching objectives	1	2	3	4	5
11. Use of reliable and valid instruments	1	2	3	4	5
12. Evaluation results which support an organization's continued existence (results not at variance with organizational goals)	1	2	3	4	5
13. Evaluators are internal to the organization	1	2	3	4	5
14. Evaluators are external to the organization	1	2	3	4	5
15. Involvement of evaluators early in development of program or project	1	2	3	4	5
16. Place of evaluation capability in the organizational structure	1	2	3	4	5
17. Responsibility for evaluation at a level appropriate to the decision makers which evaluation is to assist	1	2	3	4	5
18. Use of classical experimental research designs in evaluating programs	1	2	3	4	5

Checklist 7 (continued)

Factors and Conditions	Rating of Importance				
	Very Important	Somewhat Important	Not too Important	Not Important At All	Don't Know
19. Developing evaluation reports according to the function or role of the individual or groups	1	2	3	4	5
20. Involving the program staff or persons being evaluated in the design of the evaluation study	1	2	3	4	5
21. Extensive use of graphics in development of the evaluation report	1	2	3	4	5

Because the word-per-minute rates were somewhat higher in the employers' tests than in the classroom tests, some students consequently failed to meet the minimum performance standards demanded in certain job situations.

Consultations were held between the business staff members and individuals from government, business, and industry to develop guidelines and procedures for teaching and testing typing skills to match those often required on the job. Subsequent follow-up surveys have revealed a sharp drop in adverse comments pertaining to inadequate typing skills.

Scenario 3

The evaluation study served two purposes. One was that it resolved a lot of doubts, confusions, and misunderstandings that our state advisory committee for vocational education had and, second, gave me additional knowledge to support facts that I already knew and, as I say, broadened the scope more than I realized. In other words, the perceptions of where the technical programs were going and what they were accomplishing were a lot worse than I had anticipated . . . but I was somewhat startled to find out that they were worse, yet it wasn't very hard because it was partly confirming things that I was observing.

Scenario 4

We expected that the employer satisfaction with vocational training would be used, but in a way of providing background information around the consequences of certain kinds of state vocational education board decision-making options, but not necessarily in and of itself determining those decisions. In other words, you might have some idea of what the consequences of the decisions are, but there might be a lot of other factors you'd take into account in how you would decide.

The evaluation results had a particular impact in that they contributed to the general information context of what was going on at the time, rather than in itself. It contributes to that background of understanding the policy issues of vocational education meeting the needs of employers, rather than resulting in one option versus another of policy being.

Summary

In summary, interpretation and packaging of data and information on student satisfaction with their training and job require strict attention to the needs and characteristics of the audiences for which the information will be prepared. Figure 10 identifies general factors to be observed in organizing and formatting a report, and considerations for the graphic display of data. The reader is encouraged to review the summary checklist of strategies and techniques for improving the utilization of evaluation results.

FIGURE 10

Factors to Consider in Preparing an Evaluation Report

1. Include the survey instruments in all reports and presentations, if possible.
2. Set up local reports based upon local requirements, but also include information required by state and federal mandates that relates to local programs receiving state and federal support.
3. Break down and analyze data as much as possible, but not all information and analyses need be presented to everyone.
4. Make tabular summaries in the shortest possible form. Oral presentations are best with this type of information. Follow survey form design when making presentation, question 1, 2, 3, and so forth.
5. Prepare and present a copy of the report to each member of the audience during oral presentations, if practical. Be sure to present data in the form and content applicable to the particular audience.
6. Summarized reports are usually the best format for presentation to most groups; however, more definitive information is required in certain instances.
7. The comments section of a survey instrument is very important. This area many times reveals needs and shortcomings, especially if a particular comment is repeated several times.
8. Scan the comments section for the most frequently mentioned items, and make summaries for inclusion in reports and presentations. Refrain from using actual names (teachers, administrators, etc.) given in comments.
9. Do not attempt to include survey information from a student surveyed in the wrong curriculum area. For example, students are sometimes included in vocational surveys that may have only taken one vocational course, and are in fact pursuing college prep courses. Their inclusion in a vocational survey biases the information and increases response error.
10. Data tabulation and analysis methods must be appropriate, or nonuse of the data is assured.
11. Break out district data on a per school or program per campus basis. Most administrators are interested in information about their institution and their graduates. Compare schools to county data, or program to program data, but avoid institution to institution comparisons.
12. Break out data by program, where applicable. This format is very meaningful for vocational reports and presentations. It gains teacher support for the activity.
13. Compare and present data on courses and programs, not teachers. Many students react to questions about courses or programs by the nature of their relationship with a teacher, which biases the data.
14. Keep any sophisticated statistics in a separate section for those who wish to review them, but do not present statistics throughout a report. Rates of use will go down, especially in audiences with little or no background in research methodology.
15. Percentages, graphs, and charts are information display methods to which most populations can best relate.
16. The main use of follow-up information as it currently exists is to display general indications of the condition of an institution, district, and so forth. Include an abstract of each report that summarizes these findings and gives a brief description of the information gathering analysis techniques.
17. Make sure reports appear neat, are printed on good quality paper, and are in readable form.

CHECKLIST 8

Summary of Strategies and Techniques for Improving the Utilization of Evaluation Results

Have you considered the need to:	Yes	No
1. identify the clients of the evaluation	☐	☐
2. stress the importance or vitality of the program	☐	☐
3. encourage active client participation in implementation of the evaluation	☐	☐
4. guarantee the technical purity of the evaluation	☐	☐
5. use a variety of reporting and presentation formats	☐	☐
6. plan the sequence and determine the frequency of dissemination	☐	☐
7. key the results to the timing of decisions	☐	☐
8. include an assessment of those objectives important to clients	☐	☐
9. brief decision makers in advance of the release of the evaluation information	☐	☐
10. deal with areas of resistance	☐	☐
11. use an ombudsperson	☐	☐
12. adopt an entrepreneurial role	☐	☐
13. use an evaluation audit	☐	☐
14. establish the credentials of the evaluator	☐	☐
15. be aware of key power brokers in the program	☐	☐
16. work with media representatives	☐	☐
17. present the evaluation as an integral part of a management support system	☐	☐
18. be concerned with the political impact of positive results	☐	☐
19. be concerned with the fiscal possibilities of the findings	☐	☐
20. broadly distribute the findings	☐	☐
21. be brief in presenting evaluation results	☐	☐
22. emphasize the non-technical aspects of findings	☐	☐
23. key the language of the evaluation report to the audience	☐	☐
24. establish the credibility of the findings by using an external reviewer	☐	☐
25. compare the evaluation with similar reports	☐	☐
26. be alert to special problems inherent in the agency or program's environment	☐	☐
	☐	☐

APPENDIX

The following planning packet for a state program review follow-through is one example of a state's proactive approach toward improving the use of evaluation results. The packet includes: (1) Guidelines for Developing Evaluation Results Follow-Through Plans, (2) Plan for Program Review Evaluation Results Follow-Through, (3) Worksheets for LEAs to Prepare Vocational Program Evaluation Results Review Follow-Through Plans.

GUIDELINES FOR DEVELOPING EVALUATION RESULTS FOLLOW-THROUGH PLANS

The results of the state-directed review of vocational programs will be transmitted in a summary report. The summary report will present findings of the review team and of the state specialists, recommendations made by the review team, priorities identified by the state specialists, and suggested activities for appropriately responding to the recommendations. The local superintendent is responsible for developing utilization follow-through plans that are responsive to the findings and recommendations of the program review. This guide is designed to provide suggested procedures for developing the follow-through plan.

Written utilization follow-through plans are to be developed in response to each recommendation contained in the general section of the summary report and for each priority area and review item marked "no" on the Individual Program Review Instrument.

The primary purpose of the vocational program review is to achieve program improvement. To accomplish this purpose, it is imperative that the various individuals and groups involved in implementing the vocational program be involved in developing the utilization follow-through plan for responding to the program review. It is strongly recommended that administrators, counselors, teachers, advisory council members, and others be directly involved in developing plans for improving the vocational program and in formulating these plans into the utilization follow-through plan. Following is a suggested procedure for involving the various groups and individuals in developing your utilization follow-through plan.

Suggested Procedures for Developing Utilization Follow-Through Plan

1. Superintendent disseminate copies of the Program Review summary report to all administrators with vocational responsibility, all vocational teachers, all counselors, advisory council members, vocational support personnel, and other decision makers.

2. Superintendent and/or vocational administrator meet with vocational advisory council to obtain recommendations for long-range planning.

3. Vocational administrator meet with other administrators and vocational teachers or a committee of vocational teachers to develop initial responses to the general recommendations in the summary report.

4. Vocational administrator disseminate initial responses to other administrators, teachers,

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Source: Research Coordinating Unit, Alabama State Department of Education, December, 1979.

counselors, and other persons involved in the planning process for their review and reactions to the initial response.

5. Vocational administrator synthesizes responses for various groups and individuals and develop revised utilization follow-through plans for general recommendations.

6. Superintendent review revised plans.

7. Vocational administrator disseminate the revised response to all individuals receiving copy of the summary report for responding to the priority items and the items checked "no" on the Instructional Program Review Instrument relating to their respective programs.

8. Invite state specialists to assist teachers individually or in groups in developing plans for responding to the summary report and to generate ideas for utilizing state staff and resources in implementing the utilization follow-through plans. This may be accomplished through an inservice meeting.

9. Vocational administrator receive initial responses from teachers individually or in groups and synthesize into draft of total utilization follow-through plan.

10. Superintendent review draft of utilization follow-through plan with vocational administrator and revise as necessary.

11. Superintendent mail an approved copy of the final draft of the utilization follow-through plan to state Research Coordinating Unit. State Director and team representative review draft.

12. Superintendent and appropriate administrators meet with State Director of Vocational Education and team leader from vocational program review to discuss utilization follow-through plan, negotiate items if necessary, and finalize the plan.

13. Superintendent receive multiple copies of printed form of utilization follow-through plan.

14. Superintendent and vocational administrator disseminate copies of the utilization follow-through plan to all persons receiving copy of the Program Review summary report. Disseminate the plan in workshop setting with instructions and training necessary for individuals to discharge their responsibility in implementing the total plan.

15. Vocational administrator periodically monitor the progress being made in implementing all aspects of the utilization follow-through plan and report progress to superintendent.

16. Superintendent and vocational administrator plan necessary action to fully implement utilization follow-through plan, utilizing state staff where needed.

PLAN FOR PROGRAM REVIEW
EVALUATION RESULTS FOLLOW-THROUGH

Time Following On-site Review	
3 weeks	State Director mail one copy of summary report to local superintendent.
4 weeks	RCU staff member deliver multiple copies of summary report and Instructional Program Review Reference File to local superintendent. Staff present and discuss with local administrator(s) Guidelines for Developing Utilization Follow-Through Plans (copy attached).
12 weeks	Local superintendent mails a copy of the draft of the utilization follow-through plans to the RCU.
12+ weeks	Team representatives and State Director review draft of utilization follow-through plans.
13 weeks	State Director and team leader meet with local superintendent and other administrators to finalize utilization follow-through plan. RCU Director will substitute for State Director when State Director cannot attend.
14 weeks	Team leader prepare typed copy of the utilization follow-through plan, print enough copies for local administrators, teachers, advisory council, board members, and others as appropriate. RCU distribute copies of local superintendent and to state staff.
15 weeks	Appropriate state staff begin arranging to provide needed assistance to local staff for implementing utilization follow-through plan. All state staff with field responsibility will review utilization follow-through plan to identify systems and programs needing assistance. Such systems and programs will receive priority in planning technical assistance. Appropriate state staff will monitor local programs to determine whether or not utilization follow-through plans are being successfully implemented. When successful implementation is not being achieved, state staff shall so indicate on their visit report. Visit reports which indicate that satisfactory progress is not being accomplished in implementing part of a utilization follow-through plan shall be routed through the Chief State Specialist to the State Director. The State Director shall notify the local superintendent in writing of the need for remedial action. When satisfactory progress is still not achieved, the state superintendent will be advised. The state superintendent shall implement procedures to enforce state policies. (Technical Assistance Plan attached.)

Source: Research Coordinating Unit, Alabama State Department of Education, December 1979.

WORKSHEET 1

For LEAs to Prepare Vocational Program Review Evaluation Results Follow-Through Plan

INSTRUCTIONS: In column 1 list the number for a specific recommendation in the summary report. In column 2 indicate plan for implementing the recommendation. In column 3 indicate a suggested date at which time the recommendation could be implemented. In column 4 indicate any desired assistance from the state staff.

Rec. No.	Plans for Implementing Recommendations	Suggested Date for Implementing Recommendation	Requested Assistance

Source: Research Coordinating Unit, Alabama State Department of Education, December, 1979

WORKSHEET 2

For LEAs to Prepare Vocational Program Review Evaluation Results Follow-Through Plan

INSTRUCTIONS: In column 1 identify a specific vocational instructional program. In column 2 list the priorities, then the specific items which were checked "no" on the Instructional Program Review Instrument. In column 3 indicate plans for responding to the priority or for bringing that individual instructional program into compliance regarding the specific review item. In column 4 indicate the suggested target date for accomplishing the plan. In column 5 indicate any assistance requested from state staff to carry out your plans.

Program	Priority Items and Items Checked No	Plans for Responding to the Priority or Bringing Program into Compliance	Suggested Date for Achieving Action	Requested Assistance from State Staff

Source: Research Coordinating Unit, Alabama State Department of Education, December, 1979

GLOSSARY*

Some of the words used in evaluation utilization elude precise and clear definition. Those definitions that follow are intended to clarify the overall focus on evaluation utilization, but may be considered by some to go beyond the definitions needed in doing this type of activity. They are presented as a "definitional base" for which evaluation utilization can be understood and addressed. They are not "carved in stone" and should not be interpreted so as to foreclose alternative, potentially valuable definitions.

Acceptance — A receptive or positive attitude toward an idea or judgment; an approving reception (English 1958).

Acceptance Behaviors

1. **Exploratory Urge** — An innovation tends to be more readily accepted if consumers perceive it as a discovery or as something to investigate.

2. **Pleasure Principle** — An innovation tends to be more readily accepted if consumers see the results of it as pleasant. Unpleasant activities tend to be discontinued.

3. **Group Influence** — Consumers will tend to accept an innovation more readily if their peers have a positive attitude toward it.

4. **Reason** — Consumers who are presented with, or who consider, both the positive and negative aspects of an innovation are more likely to adopt that innovation than are the consumers who are presented with only one aspect (positive or negative).

5. **Stimulation Drive** — Consumers tend to accept an innovation more readily if they see the input as exc ig.

6. **Meaning Drive** — An innovation will tend to be accepted more readily if consumers can clearly see the relationship between themselves and the innovation. On a more concrete level, he may be wanting to know why an activity must be performed, i.e., how does the activity relate to something or someone else.

7. **Self-actualization** — An innovation will tend to be accepted more readily if consumers perceive it as an opportunity to grow emotionally, socially, intellectually, physically, or spiritually.

8. **Young of Age** — An innovation will tend to be accepted more readily by consumers young in age than by older individuals.

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* This glossary was developed primarily from the publication, *Assemblage of Change Process and Diffusion Terminologies* (1973) by Lois Harrington, The Center for Vocational Education, The Ohio State University.

9. **Cosmopolitan** — An innovation will tend to be accepted more readily if consumers have a relatively wide range of experiences, i.e., if they have needed to cope with a diversity of individuals, situations, environments, cultures, or subcultures.

10. **Personal or Organizational Affluence** — Consumers with easy access to financial or organizational resources will tend to accept an innovation more readily than someone with few financial resources or with low status in the organization (EPIC Evaluation Center 1970).

Accountability — A process applied to a program which parallels and is used in conjunction with financial accounting. Expected outcomes of the learning experience are prestated in terms permitting pre- and posttesting to determine the extent to which objectives have been achieved, and to permit a comparison of costs and benefits of various approaches to instruction. Stated objectives are expected to be realistic within legal, fiscal, and resource constraints, and to reflect current population needs for occupations preparation, and current manpower and job requirements (AVA, March 1971).

Adaptability — Capacity of a school district to respond to change in order to meet the educational needs of the youth within the district (Harrell 1968).

Adaptation — Refers in the psychological sense to the process of establishing and maintaining a relatively stable, reciprocal relationship with the environment; for human beings this means the human, social, or interpersonal environment (Brody, in Maguire, Temkin, and Cummings 1971).

Adoption —

1. A decision to make full use of new ideas as the best course of action available (Rogers and Shoemaker 1971)

2. Process of institutionalizing a new program (Stufflebeam 1980).

Adoption Process — The mental process through which an individual passes from first hearing about an innovation to final adoption (Rogers 1962).

Anecdotal Evidence — Casually observed incidents (English and English 1958).

Anecdotal Record — A record of casually observed events that seem to the reporter to have possible significance (English and English 1958).

Barrier — The static property of a system that stops messages, keeping them inside or outside of the system (Havelock 1969).

Change —

1. An alteration in the structure of the organization, in any of its processes, or in its goals or purposes (Miles 1964).

2. Quantitatively, a shift in size or scope of operations, acquisition of new skills, goals, values, or orientations. Qualitatively, a change may involve the substitution of parts or elements, an addition without changing old elements or patterns, restructuring, eliminating old behavior, or reinforcing old behavior (Havelock 1969).

3. The process by which alteration occurs in the structure of a school system (Rogers, in Duncan 1972).

Change Agent —

1. A professional who administers a procedure that is designed to produce behavioral, attitudinal, and personality change. Two essential criteria must be satisfied for the change agent: the individual must be acting in a professional rather than a personal capacity; and the impact of his actions must be directed toward producing change in others with whom he is working (Mann 1965).

2. A professional who influences innovation decisions in a direction deemed desirable by a change agency (Rogers and Shoemaker 1971).

Change, Attitude — Three types: **cognitive-oriented approach** — attempts to modify persons' attitudes by altering their beliefs about the attitude object through various forms of persuasive communications; **affect-oriented approach** — both evaluations of, and behavior toward, particular attitude objects are modified by altering their emotion-arousing properties, usually through direct or vicarious conditioning procedures; **behavior-oriented approach** — getting a person to engage in new behavior in relation to the attitude object without untoward consequences (Bandura, Blanchard and Ritter, in Maguire, Temkin, and Cummings 1971).

Change, Educational —

1. Any change in schools or schooling that represents a perceptible departure from an existing norm . . . to speak about a departure from the norm is to place no value on the direction or magnitude of the change (Smith 1972).

2. A partial or whole alteration in pattern of an ongoing educational system (Harrell 1968).

Change Process — A series of conditions, strategies, or procedures employed to effect a given alteration in a client system (Norton 1971).

Change Process, Educational — The methods and means by which an educational system or entity is altered in pattern or form (Harrell 1968).

Change, Programmatic — That change which occurs according to a schedule or system under which action is taken toward a desired goal (Stufflebeam 1970).

Change, Social -- The process by which alteration occurs in the structure and function of a social system (Rogers and Shoemaker 1971).

Change, Technological — Ontological view — invention and innovation are visible manifestations of a self-generating process or an institution having a dynamism and a life of its own; teleological view — invention and especially innovation are impersonal social processes determined by social or military needs or by the existence of an effective economic demand (Ayres, in Maguire 1971).

Communication —

1. Communication was conceived as an event linking pairs of staff members. Operationally, teachers and administrators were asked to specify others on the staff with whom they talked regularly about school affairs and when two parties specified one another, a communication bond was said to exist between them (Charters 1969).

2. The process by which messages are transferred from a source to a receiver (Rogers and Shoemaker 1971).

3. A high degree of dynamic dependence between two personal regions so that the changes in one bring about proportional changes in the other (Lewin, in English and English 1958).

Communication Channel — The means by which the message gets from the source to the receiver.

Communication, Formal — Information exchange between members of the organization through formal channels provided by the organizational structure.

Communication, Informal — Information exchange between members of the organization through channels other than those formal, specialized channels provided by the organizational structure.

Communication Network — The set of channels employed by a group or individual when communicating with each other (Mann 1965).

Community, Educational — Goes beyond the walls of the school buildings. It includes all of those groups that have a vital interest in the educational system: teachers, school administrators, students, board members, parents, and the community-at-large (Hitt).

Compliance — A yielding to the desires, suggestions, or proposals of another person; has less implication of resistance or of yielding unwillingly than obedience (English and English 1958).

Conflict — Involves an interaction between two or more individuals or alternatives as a result of difference in position or resource scarcity (Gerhardt and Miskell 1972).

Conflict, Interpersonal — A relationship between two or more persons who seek goals that cannot be simultaneously attained under the prevailing conditions; a conflict within the individual that has root in his relations with others (English and English 1958).

Confrontation — A situational setting where two or more cognitive factors come into contact with each other with the purpose of comparing or discerning likenesses and differences (Guerin, in Maguire, Temkin, and Cummings 1971).

Consensus — A meeting of advocates and consumers who have the same primary goals and values. Such a meeting tends to result in the innovation being adopted at the integration level (EPIC Evaluation Center 1970).

Credibility — The degree to which a communication source or channel is perceived as trustworthy and competent by the receiver (Rogers and Shoemaker 1971).

Decision Making — The process of choosing from among two or more available options in response to some situation requiring altered action.

Decision Model, Synoptic Ideal — A change model aspiring to a thorough analysis of available solutions but requiring consideration of all possible consequences for all possible solutions in terms of all relevant success criteria; there is much information available to you concerning the probable success of your solution (EPIC Evaluation Center 1970).

Decision Model, Disjointed Incremental — A change model aspiring to small changes and focused mostly on current needs and problems; there is little information available to you concerning the probable success of your solution (EPIC Evaluation Center 1970).

Decision Model, Planned Change — A change model aspiring to large change (involving many steps) and focused mainly on long-range goals; there is little information available to you concerning the probable success of your solution (EPIC Evaluation Center 1970).

Decision Setting, Homeostatic — Denotes restorative activity aimed at the purpose of maintaining the normal balance in an educational system, and guided by technical standards and a routine, cyclical data collection system (Stufflebeam 1970).

Decision Setting, Incremental — A change setting in which your solution is gradually implemented for the purpose of continuously improving an education system; there is little information available to you concerning the probable success of your solution (EPIC Evaluation Center 1970).

Decision Setting, Metamorphic — Denotes utopian activity intended to produce complete changes in an educational system, based upon full knowledge of how to effect the desired changes (Stufflebeam 1970).

Decision Setting, Neo-Mobilistic — A term contrived to convey the idea of change or movement toward the new—denotes innovative activity for inventing, testing, and diffusing new solutions to significant problems—supported by little theory or extant knowledge, yet the change is large (Stufflebeam 1970).

Decision Situations, Homeostasis — Decisions to effect small changes supported by a high level of relevant understanding (Guba and Stufflebeam, in Maguire et al. 1971).

Decision Situations, Incrementalism — Decisions to effect small changes supported by a low level of relevant understanding (Guba and Stufflebeam, in Maguire 1971).

Decision Situations, Metamorphism — Decisions to effect large changes supported by a high level of relevant understanding (Guba and Stufflebeam, in Maguire et al. 1971).

Decision Situations, Neo-Mobilism — Decisions to effect large changes supported by a low level of relevant understanding (Guba and Stufflebeam, in Maguire et al. 1971).

Decisions, Authority — Those forced upon an individual by someone in a superordinate power position. The individual has no influence on the innovation decision (Rogers and Shoemaker 1971).

Decisions, Collective — Those which individuals in the social system agree to make by consensus (Rogers and Shoemaker 1971).

Decisions, Contingent — Those which individuals in the social system agree to make by consensus (Rogers and Shoemaker 1971).

Decisions, Individual — The individual has some influence on the innovation decision (Rogers and Shoemaker 1971).

Decisions, Optional — Made by an individual regardless of the decisions of other members of the system (Rogers and Shoemaker 1971).

Diffusion —

1. The (a) acceptance (b) over time (c) of some specific item—an idea or practice, (d) by individuals, groups, or other adopting units, linked (e) to specific channels of communication (f) to a social structure, and (g) to a given system of values or culture (Katz, Levin, and Hamilton 1963).

2. (a) Placing an innovation with given characteristics into (b) a setting which has certain features and in which (c) the practitioner has customary ways of behaving (Brickell 1971).

3. The process by which new ideas are communicated to the members of a social system, from a source to a receiver. Five stages: *awareness, interest, evaluation, trial, adoption* (Rogers 1955, Rogers and Shoemaker 1971).

Diffusion Process — The spread of a new idea from its source of invention or creation to its ultimate usersusers or adopters (Rogers 1962).

Diffusion Rate — The amount of time for an innovation or educational change to spread from a given locale to another (Harrell 1968).

Diffusion Set — Selected persons in key positions within the system who have given full sanction to the change idea. The diffusion set functions to make the need for change that of other key persons within the system. This set attempts to get a definition of need from the client system. (Harrell 1968).

Dissemination —

1. A controlled process of multimedia communications through which information is passed to and gathered from target audiences in order to establish levels of awareness and to induce reactions to an adoption of defined programs (Simmons 1968).

2. A process similar to diffusion, but has three more ingredients: (a) the system within which the transmission takes place is well defined; (b) the transmission is a deliberate effort on the part of the source component; (c) the description and control of the transmission process within the system is more or less complete and precise (Lin, Leu, Rogers, and Schwartz 1966). See *Diffusion*

Distribution — Dissemination and distribution are two separate functions. The term distribution will be used to refer to all of the functions associated with transferring, storing, insuring, mailing, handling, billing, packaging, collecting, replacing, etc. (Rosenau, Hutchins, Hemphill).

Educational Process — The entire activity that is directed toward formulating and accomplishing the objectives of the school system (Hitt).

Evaluation —

1. The process of delineating, obtaining, and providing useful information for judging decision alternatives (PDK, in Stufflebeam, 1970).

2. A systematic procedure whereby the quality of the teaching-learning process and the achievement of stated objectives are ascertained. An ongoing process that provides input and feedback to guide change and offer directions for the program and its modification (AVA, March 1971).

Evaluation, Context — Defining the operating context, needs in the context, and problems underlying those needs (Stufflebeam, in Hock, Kean and Smith).

Evaluation, Input — Assessment and identification of system capabilities, strategies, and designs for strategies to solve problems (Stufflebeam, in Hock, Kean, and Smith).

Evaluation, Process — Identification of procedural defects in designs (Stufflebeam, in Hock, Kean, and Smith).

Evaluation, Product — Process of relating outcome information to objectives and context, input and process information (Stufflebeam, in Hock, Kean, and Smith).

Facilitator -- A decision, person, or condition that lowers the threshhold of resistance and aids the movement of an innovation toward a desired outcome (Hull 1972).

Gatekeeper — A strategic role holder who is a middleman and monitors external information sources to a greater extent than his coworkers, so that he could relay to his coworkers useful knowledge from outside; one who stands guard over the entry points to the client system (Havelock 1969).

Heuristic —

1. Serving to discover or reveal; notion of self discovery; problem solving with emphasis on imaginative and not routine problem solving. (Kerlinger 1973)

2. 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 (U.S. General Accounting Office, October 1969).

Information, Profession-Relevant — That information deemed desirable in achieving organizational objectives but not regarded as critical to the performance of the individual's routine function in that organization.

Information, Work-Relevant (task oriented) — That information critical to the performance of routine functions of the organization's employees.

Information System — Refers to a body of organized procedures for the collection, processing, and dissemination of information—refers to continuing systems and to systems established for one-time reports. The procedures may, but need not, involve the use of automatic data processing equipment (Intergovernmental Task Force Information Systems 1968).

Innovation —

1. An idea, practice, or object perceived as new by an individual (Rogers and Shoemaker 1971).

2. Innovation in education is the creative selection, organization, and utilization of human and material resources in new and unique ways which result in the attainment of a higher level of achievement of the defined goals and objectives (Purdy 1968).

3. The introduction of a new element, idea or method into a system (Harrell 1968).

Innovation Assimilation — The extent of integration of an innovation or change into a defined social system or stitution (Lin, Leu, Rogers, and Schwartz 1966).

Innovation, Technological — The process of translating knowledge into economic reality; involves four functions: (a) scientific (search for knowledge); (b) engineering (reduction to practice); (c) entrepreneurial (introduction to society); (d) managerial (optimization of usage). Each function requires a different type of skill and knowledge, involving some changes of attitudes and values, and requiring the manipulation of very different resources (Bright, in Maguire et al. 1971).

Innovator — The category of adopters who are first to adopt a new idea (Rogers 1962).

Innovation-Decision Process — The mental process through which an individual passes from first knowledge of an innovation to a decision to adopt or reject, and to confirmation of this decision (Rogers and Shoemaker 1971). See *Adoption Process*

Innovativeness — The degree to which an individual is relatively earlier in adopting new ideas than the other members of his social system (Rogers and Shoemaker 1971).

Instructional Communicator — A primary change agent; school personnel knowledgeable in curriculum and instruction and public relations; generally, a person who is on the central office or supervisory staff (Harrell 1968).

Integration — The innovation becomes routine, i.e., is part of day-to-day working life of the teacher, or the administrator, or the user, whoever he may be (EPIC Evaluation Center 1970).

Interest — Characterized by active information seeking about the innovation. Although the consumer has an interest in the innovation and a generally open attitude toward it, at this stage he has not made a judgment as to whether or not the innovation would be suitable for his own particular circumstances. As he gathers more information and learns more about the innovation, the consumer's first positive or negative attitudes toward it begin to emerge. These feelings may prompt him to decide against adoption, or they may motivate him to move on to the next phase in the adoption process (EPIC Evaluation Center 1970).

Internalization —

1. The change agent is perceived by the client as credible; the maintenance of any attitude change is dependent on the relevance of the values to the issue (Kelman 1958).

2. The extent to which a member of an organization perceives the innovation to be relevant and valuable to his role performance (Lin, Leu, Rogers, and Schwartz 1966).

Leader — By definition, creates change (Lipham 1969). See *Administrator*

Leadership — Interactive and situational; it arises only where a group follows an individual from free choice and not under command or coercion, and not in response to blind drives, but on positive or more or less rational grounds (Schmidt, in Bhola 1972).

Legitimation — The approval or sanctioning of an innovation by those who informally represent the social system in its model norms and values and in the social power they possess (Rogers and Shoemaker 1971).

Model, Deterministic — A model in which the variables take on only definite values, that is, a model that does not permit any risk as to the magnitude of the variables; for example, a set of simultaneous equations for which there is a unique solution.

Model, Linear or Dependency — Views the goal of educational improvement as being dependent upon adequate diffusion mechanisms, which in turn require the invention and development of tested innovations to diffuse, which in turn depend upon the adequacy of the research base (Gideonse, in Maguire et al. 1971).

Model, Linkage — Stresses the close interrelations of research, development, and dissemination . . . tend to be performer-oriented and stress the importance of individuals in a research-development-dissemination continuum (Gideonse, in Maguire et al. 1971).

Model, Probabilistic — A model in which each variable may take on more than one value. Such models are sometimes called stochastic which means, literally, "making a best guess" (U.S. General Accounting Office, October 1969).

Monitoring — To observe critically; to oversee, record or detect an operation, product or program, with instruments that have no effect on the operation, product, or program (Nikolai 1972).

Need — The situation which occurs when what is actually happening is below that which is expected (EPIC Evaluation Center 1970).

Need, Felt — Something regarded as either desirable or necessary by the individual concerned, as distinct from something which, whether desirable or not, is not recognized as such by the individual in question (Good 1959).

Norm —

1. The most frequently occurring pattern of overt behavior for the members of a particular social system. The norms in a social system may be traditional and discourage the adoption of new ideas, or they may be modern and encourage the use of innovations (Rogers 1962).

2. Standard or criterion for judgment (Good 1959).

Observability — The degree to which the results of an innovation are visible to others (Rogers and Shoemaker 1971).

Opinion Leaders — Those individuals from whom others seek information and advice (Rogers 1962).

Opinion Leadership — The ability to informally influence other individuals' attitudes or behavior in a desired way with relative frequency (Rogers and Shoemaker 1971).

Orientation-to-Change Score — An individual's degree of general predisposition toward change (Lin, Leu, Rogers, and Schwartz 1966).

Power, Coercive — Based upon the expectation of punishment by those subject to power for failure to conform to administrative goals (Warren 1969).

Power, Expert — Derived from the extent of knowledge or perceived knowledge possessed by a group or individual (Warren 1969).

Power, Legitimate — The superior need not to coerce or persuade subordinates in order to influence them, because they have accepted as legitimate the principle that some of their actions should be governed by his decisions (Blau, in Warren 1969).

Power, Referent — A feeling of oneness . . . or a desire for such an identity (French and Raven, in Warren 1969).

Power, Reward — The client perceives that the change agent has the ability to administer rewards which are valued by the client, and that there is a reasonable possibility of receiving the reward.

Practitioner — Ultimate adopter of an innovation (Brickell 1971).

Primary Initiators — Key people in the system who act as change agents, spreading enthusiasm and excitement about a change idea. In educational change, primary initiators are generally key teachers. Administrative and supervisory personnel, excluding the instructional communicators, are referred to as secondary initiators. Initiators may be counted upon to give full support and sanction to the change idea (Harrell 1968).

Process Model — A general plan of action or design for bringing about a desired educational change. A model has specific devices and alternative strategies which vary from one locale to another (Harrell 1968).

Product — A product is something produced by labor. It is a person or thing produced by or resulting from a process . . . books, monographs, and other publications; people, such as graduates; films; teacher training programs (Nikolai 1972).

Product, Knowledge — Fills an important gap in our knowledge about subjects or topics relevant to education. The generation of that new information should permit major progress to be made in either basic or applied activities; progress which would not have been possible without the creation of that new product . . . a knowledge product may provide new information about effective learning strategies for elementary school children; or it may contribute new knowledge concerning more effective school management techniques; or it may provide data concerning the effectiveness of certain instructional programs . . . the new knowledge product does not become a "product" until it is readily available to other educational practitioners.

Products, Classes of — Information documents; training materials; installable systems.

Program Development — Inventing, designing, and refining combinations of methods, materials, and subject content (Swanson 1967).

Rejection —

1. A decision not to adopt an innovation (Rogers 1962).

2. A direct response to planned change; reflects a lack of consensus between those initiating change and those implementing it (Sussman and Haug, 1969, in Maguire et al. 1971).

Relative Advantage — The degree to which an innovation is perceived as better than the idea it supercided (Rogers and Shoemaker 1971).

Reliability –

1. That part (of a result) which is due to permanent systematic effects, and therefore persists from sample to sample (Kendall and Buckland 1971).

2. Accuracy: dependability; trustworthiness; the quality or qualities of a person or thing in virtue of which it can be counted on; the complex property of a series of observations of a measuring instrument, or of the entire measuring process, that makes possible the obtaining of similar results upon repetition; the degree to which such similar results may be predicted; the degree to which measurement is free from random influence (English and English 1958).

Research –

1. Process of creating new knowledge through scientific method (Stufflebeam 1970).

2. Careful, critical, disciplined inquiry, varying in technique and method according to the nature and conditions of the problem identified, directed toward the clarification or resolution (or both) of a problem (Good 1959).

Resistance – An ongoing mental decision to reject an idea for change.

Risk – "Measurable uncertainty," per the economist Frank Knight. In decision theory, the distinction is made that risk is measurable while uncertainty is not. In situations of risk, the probabilities associated with potential outcomes are known. The term may be associated with situations of repeated events, each individually unpredictable, but with the average outcome highly predictable. In situations of uncertainty, the probabilities are not known (U.S. General Accounting Office, October 1969).

Software –

1. Telemedia: transmitted programs and messages; recording media: recorded program materials (e.g., films, tapes, books, discs, etc.) containing recorded messages; and both: working materials from which a program is created. May include scripts, written narration, audio or visual aids, etc., especially created or assembled for the production (Bretz 1971).

2. The set of programs and routines used to operate a computer (Clubb and Traugott 1978).

Strategy –

1. A general plan of action addressed to a broad, long-term objective . . . it consists of several specific tactics (Brickell 1971).

2. Overall plan of action concocted in the terms of the model (underlying theory) (Guba 1971).

3. A unique set of mutually consistent diffusion techniques designed for diffusing a particular innovation to a particular clientele audience (Hull).

Strategy, Integrative – A strategy for effecting change in which "the change agent works WITH the change target, solving problems, educating and negotiating" (Weissman, in Fainstein and Fainstein 1972).

Strategies, Advocate –

1. Coercion – the use of power by an advocate to force the installation of an educational change. This is the most commonly employed advocate strategy. It is also the least effective in achieving the integration level of adoption. In a coercive relationship, one of the parties, usually the advocate, has the ability to get the other party to try almost any new thing the powerful party recommends (EPIC Evaluation Center 1970).

2. **Confrontation** — the head-to-head meeting of equally powerful and independent advocates and consumers. In the confrontation strategy, the advocate and consumer have different primary goals, but are motivated to come together either by law or by other needs (EPIC Evaluation Center 1970).

3. **Collaboration** — the friendly meeting of advocates and consumers who openly seek cooperation from each other. In such a meeting, the consumer's goals usually "appear" to dominate those of the advocate. Appearances, however, may be created by the advocate to put the consumer at ease. In a collaborative relationship, the advocate is usually perceived as a consultant (EPIC Evaluation Center 1970).

4. **Consensus** — the meeting of advocates and consumers who have the same primary goals and values. Such a meeting tends to result in the innovation being adopted at the integration level (EPIC Evaluation Center 1970).

System — Set of orderly and persisting interrelations between parts of a whole; all the elements that work together to perform a given function (English and English 1958).

System, Educational — A collection of interdependent parts of a social system having definite boundaries, given to the accomplishment of educational goals (Harrell 1968).

System, Open — There is a dynamic interplay among the essential functional subprocesses or subsystems in the organismic system which enables it to maintain itself in a homeostatic steady state. Assuming a sufficient input of materials from its environment, the organism develops toward a characteristic state despite initial conditions (equifinality). All of this is accomplished through an automatic self-regulatory process (Hearn, in Miles, 1964).

Systems Analysis — The process of breaking a system down into its constituent component parts, noting the relationships between the parts and between each part and the whole from which it derives (Kaufman and Corrigan 1967).

Trial — The individual applies the innovation on a small scale (Rogers 1955).

Trialability — The degree to which an innovation may be experimented with on a limited basis (Rogers and Shoemaker 1971).

Utilization, Knowledge — May be conceptualized as a system and as a process. A system model of utilization uses concepts such as "organization," group, person, agent, position, role, channel, and "link." A process model includes such concepts as "relationship," linkage, transfer, exchange, translation, diffusion, and communication" (Havelock 1969).

Validity —

1. A test is valid to the degree that we know what it measures or predicts. There are two basic approaches to validity: logical analysis and empirical analysis. In logical analysis, one attempts to judge precisely what the test measures. In empirical analysis, one attempts to show that the test is correlated with some other variable and therefore measures the same thing (Cranbach 1949).

2. The quality of being grounded on truth or fact; the extent to which a test or other measuring instrument fulfills the purpose for which it is used; usually investigated by an analysis of test content or by a study of relationships between test scores and other variables (Good 1959).

Validation — A procedure which provides, by reference to independent sources, evidence that an inquiry is free from bias or otherwise conforms to its declared purpose; validity is to be contrasted with consistency, which is concerned with the internal agreement of data or procedures among themselves (Kendall and Buckland 1971).

Vested Interest — An interest (as in an existing political, economic, or social arrangement) in which the holder has a strong personal commitment (Webster 1965).

Volition — Act of deciding upon and initiating a course of action; action without external compulsion; voluntary activity (English and English 1958).

ANNOTATED BIBLIOGRAPHY

Using Evaluation Results

Alkin, M. C.; Daillak, R.; and White, P. *Using Evaluations: Does Evaluation Make A Difference?* Beverly Hills, CA: Sage Publications, 1979.

The authors use the broader definition of evaluation utilization, challenge the nonutilization or underutilization of evaluation results reported in much of the literature. The results of five case studies of ESEA Title I and Title IV evaluations of school programs, with an in-depth examination of impact that the evaluation results have upon program decision making, are presented to support this alternative definition. A review of literature and a description of the case study method for the examination of evaluation utilization is presented. Followed by the presentation of the five case studies, the final section of the book presents a framework toward a theory of evaluation utilization.

Braskamp, L.A., and Brown, R. D., eds. "Utilization of Evaluation Information." *New Directions for Program Evaluation,* no. 5. San Francisco: Jossey-Bass, Incorporated, 1980.

The editors state that in editing this source book they have examined the many issues, concerns, practices, and theories that need to be considered in studying and analyzing evaluation utilization. The book addresses four major questions related to evaluation utilization: (1) what is meant by utilization, (2) what is the role and function of the evaluator with respect to utilization, (3) what contextual and organizational factors influence utilization, and (4) how can evaluation results be communicated effectively? The editors state that although there is no definitive solution to the problem of maximizing the usefulness of evaluation information, some important insights and suggestions on making evaluations more useful can be gained from those doing research and having experience in a variety of settings.

Braskamp, L. A.; Brown, R. D.; and Newman, D. L. "The credibility of a Local Educational Program Evaluation Report: Author Source and Client Audience Characteristics." *American Educational Research Journal,* 15, no. 3 (1978): 441-450.

The article describes the study of a series of simulations that have been conducted to examine the effects of source and message of educational evaluation reports (evaluation of Arts Curriculum Program). The study focus was to determine if client, teacher, and administrators' responses to an evaluator's report (author identified as an evaluator, researcher, or art educator) are affected by the title and professional background of the evaluator, the part of the program being evaluated, and the client's organizational role status. The authors conceptualized the interpretation and use of program evaluation as a process of several steps using a model that has guided research on communication and persuasion; who says what, how, to whom, and with what effect. The study results suggest that source and audience characteristics influence client ratings of the evaluator but do not affect changes in agreement with the evaluator's recommendations. In summary, the authors state that little is

known yet about the effects of source, channel, message, and audience and their interactions on changes in client understanding of the program or product being evaluated, and on administrative actions of the clients within a decision-making environment.

Guba, Egon G. "Problems in Utilizing the Results of Evaluation." *Journal of Research and Development in Education,* 8, no. 3 (1975): 42-45.

This article focuses on the clients of the evaluation. The clients are defined as administrators and decision makers who fund, operate, or coordinate the educational or social action program being evaluated. The author identifies seven factors that affect the clients' utilization of evaluation results. These factors are (1) failure to satisfy the purposes of evaluation, (2) failure to meet the criteria of a good evaluation, (3) failure to detect the discrepancies between program plans and program operations, (4) failure to define the innate differences among the many audiences entitled to receive the evaluation information, (5) failure to identify the rapid pace of change, rapid fluctuations in the society itself, and frequent redirections in program mission that occur because of personal or policy alterations in the funding agencies, (6) failure to assess the integrity of the evaluator with regard to the programs they evaluate, and (7) failure to take into consideration the human and political factors that may affect the evaluation. In sum, Guba states, "the risk that evaluation information will not be readily utilizable is as a result of this conglomerate of factors, sufficiently high that the prudent client will exercise great care in commissioning an evaluation, lest he find his investment to have been misspent."

Mertens, D. M. "Methodological Considerations in the Use of Evaluation Data for Policy Making." Paper presented at the 1980 Evaluation Research Society Annual Meeting, Arlington, VA, November 19, 1980.

The paper focuses on the question, "What type of information will Congress find useful in formulating policy on youth employment initiative, specifically, vocational education which affects high youth unemployment?" The author highlights a study of the effects of vocational education for the purpose of providing information to policymakers (Mertens et al., 1980). This study attempted to assemble and summarize all studies that could be obtained on the effects of participating in vocational education that were reported from 1968 through 1979. Based on the analysis of those studies using predetermined standards for research quality, the author draws four conclusions which affect evaluation utilization. One is that in terms of reporting research, more emphasis should be given to describing the educational program in order for researchers to know what the "treatment" actually is. Two, if sound conclusions are to be drawn concerning the effects of vocational education, sound research must be more pervasively conducted, reported, and disseminated. Third, researchers have an obligation to the educational community to report their findings in such a manner that they are accessible to others. Fourth, the author states that many authors have made recommendations to researchers on how to improve their responsiveness to policymakers' needs (Coleman, 1972; Florio et al., 1979; Pincus, 1980) while following such recommendations has the potential of yielding better information for policymakers, it will not make the "real world" complexities go away. Finally, adding that harsh reality will forever limit the research methodologies and will result in conflicting findings.

Patton, M. Q. *Utilization-focused Evaluation.* Beverly Hills, CA: Sage Publications, 1978.

The author states that the contents of this book have emerged from many sources: studies of utilization; experience conducting evaluation; current theories of formal organizations and organizational dynamics; recent developments in decision making theory and policy analysis; work in the diffusion of innovations and utilization of knowledge; and many sources in the rapidly growing evaluation research literature. He adds that the book records his experience in doing useful evaluation research from those who know. The book is considered both practical and theoretical. It presents a "how-to" on useful evaluative research and why to conduct it in the manner prescribed. He uses relevant literature and actual case examples very effectively to illustrate major points.

Rutman, L. *Planning Useful Evaluations: Evaluability Assessment.* Beverly Hills, CA: Sage Publications, 1980.

The author establishes the rationale for the book based on his recognition that many impact evaluations were ineffective because of the evaluators' failure to determine whether the program was structured and implemented in a manner that made it worthwhile to evaluate; and if it were feasible to implement methodologies to meet the study's purposes. Modifying and adapting the "Evaluability Assessment" methodology developed by Wholey (1970) of the Urban Institute, Rutman provides direction for planning more useful program evaluations.

SELECTED BIBLIOGRAPHY

Abramson, T., Tittle, C. K., and Cohen, L. *Handbook of Vocational Education Evaluation,* Sage Publications, Inc., 1979.

Abt, C. C. *The Evaluation of Social Programs.* Beverly Hills, CA: Sage Publications, 1976.

Ackoff, R. L. *The Art of Problem Solving.* New York: John Wiley and Sons, 1979, American Vocational Association.

Ackoff, R. L. *Redesigning the Future.* New York: The Free Press, 1974.

Agarwala-Rogers, R. "Why is evaluation research not utilized?" In M. Guttentag (ed.), *Evaluation Studies Review Annual,* (Vol. 2). Beverly Hills, CA: Sage Publications, 1977.

Alistair, H. "Satisfaction and Satisfactoriness: Complementary Aspects of Occupational Adjustment." *Occupational Psychology,* 23 (1954): 740-753.

Alkin, M. C. "Evaluation: Who needs it? Who cares?" *Studies in Educational Evaluation, 1,* 1975: 201-212.

Alkin, M. C., and Daillak, R. H. "A Study of Evaluation Utilization." *Educational Evaluation and Policy Analysis,* Vol. 1, No. 4, 1979: 41-49.

Alkin, M. C.; Daillak, R. H.; and White, P. *Using Evaluations: Does Evaluation Make a Difference?* Beverly Hills, CA: Sage Publications, 1979.

An Analysis of the Evaluation of State Educational Programs. Sacramento: California State Legislature, Office of the Legislative Analyst, 1975 (ED 114417).

Anderson, S. B., and Ball, S. *The Profession and Practice of Program Evaluation.* San Francisco, CA: Josey-Bass Publishers, 1978.

Arnold, W. M. *Vocational Technical and Continuing Education in Pennsylvania: A Systems Approach to State-Local Planning.* Harrisburg, PA: Department of Public Instruction and Pennsylvania State Board of Education, 1969.

Barton, P. E., and Fraser, B. S. *Between Two Worlds: Youth Transition from School to Work.* Washington, D.C.: National Manpower Institute, August 1978.

Berdie, D. R., and Anderson, J. F. *Questionnaires: Design Use.* Metuchen, NJ: Scarecrow Press, Inc., 1974.

Bernstein, I. N. *Validity Issues in Evaluative Research.* Beverly Hills, CA: Sage Publications, 1976.

Beuke, V. Review of the Change Literature with Implementation for ISSQE Dissemination. 1979.

Beuke, V., and Farrar, S. *A Review of the Change Literature with Implications for Issue Dissemination.* Ithaca, NY: Cornell Institute for Occupational Education, Cornell University, September, 1979.

Bhola, H. S. "Notes Toward a Theory — Cultural Action as Elite Initiatives in Affiliation/Exclusion." Viewpoints, Vol. 48, No. 3 (1972): 1-37. (Indiana University, Bulletin of the School of Education. Planned Educational Change: Some Issues, Some Directions)

Blanton, J., and Alley, S. "How Evaluation Findings Can Be Integrated into Program Decision Making. *Community Mental Health Journal,* 14 (1978): 239-247.

Borgatta, E. F., and Jackson, D. J., eds. *Aggregate Data: Analysis and Interpretation.* Beverly Hills, CA: Sage Publications, 1980.

Boruch, R. F., and Cordray, D. S. *An Appraisal of Educational Program Evaluations: Federal, State, and Local Agencies.* Evanston, IL: Northwestern University, 1980.

Braskamp, L. A., and Brown, R. D., eds. "Utilization of Evaluative Information." In *New Directions for Program Evaluation.* No. 5, 1980.

Braskamp, L. A.; Brown, R. D.; and Newman, D. L. "Credibility of a Local Educational Program Evaluation Report: Another Source and Client Characteristic." *American Educational Research Journal,* 15 (1978): 441-450.

Braybrooke, D., and Lindbloom, C. E. *A Strategy of Decision: Policy Evaluation as a Social Process.* New York: Free Press of Glencoe, 1979.

Brayfield, A. H., and Crockett, W. H. "Employee Attitudes and Employee Performance." *Psychological Bulletin* 52 (1955): 396-424.

Bretz, R. *A Taxonomy of Communication Media.* Englewood Cliffs, NJ: Educational Technology Publications, 1971.

Brickell, H. M. "Alternative Diffusion Strategies. Paper for the Center for Vocational and Technical Education, The Ohio State University, 1971.

Brickell, H. M.; Aslanian, C. B.; and Spak, L. J. *Data for Decisions.* New York: Policy Studies in Education, 1974.

Brown, R. D.; Braskamp, L. A.; and Newman, Dianna L. "Evaluator Credibility as a Function of Report Style: Do Jargon and Data Make a Difference?" *Evaluation Quarterly* (1978).

Budd, R. W.; Thorp, R. K., and Donohew, L. *Content Analysis of Communications.* New York: MacMillan Company, 1967.

Caplan, N. "A Minimal Set of Conditions Necessary for the Utilization of Social Science Knowledge in Policy Formation at the National Level. In *Using Social Research in Public Policy Making.* Edited by C. H. Weiss. Lexington, MA: Lexington Heath, 1977: 183-197.

Caplan, N. "Social Research and National Policy: What Gets Used by Whom, for What Purpose, and with What Effects." In *Evaluation Studies Review Annual,* Vol. 2. Beverly Hills, CA: Sage Publications, 1977.

Carlson, P. G. "The Relationship of Three Organizational Variables of the Utilization of Evaluation." Unpublished dissertation, Faculty of Educational Development, The Ohio State University, 1973.

Charters, W. W., Jr. "Stability and Change in the Communication Structure of School Facilities." *Educational Administration Quarterly,* 5, No. 3 (1969): 15-38.

Chase, S. *Power of Words.* New York: Harcourt, Brace and Company, 1954.

Churchman, C. W. *Information for Decision Making: Quantitative and Behavioral Dimensions.* Englewood Cliffs, NJ: Prentice-Hall, Inc., 1970.

Clubb, J. M., and Traugott, M. W. *Using Computers.* Washington, DC: Division of Educational Affairs, The American Political Science Association, 1978.

Cohen, L. H. "Factors Affecting the Utilization of Mental Health Evaluation Research Findings." *Professional Psychology,* 8 (1977): 526-634.

Conner, R. F. "The Evaluation of Research Utilization." In *The Handbook of Criminal Justice Evaluation.* Edited by M. W. Klein and K. S. Teilmann. Beverly Hills, CA: Sage Publications, 1979.

Cook, T. D., and Pollard, W. E. "Guidelines: How to Recognize and Avoid Some Common Problems of Mis-utilization of Evaluation Research Findings." *Evaluation* 4 (1977): 161-164.

Cox, G. B. "Managerial Style Implications for the Utilization of Program Evaluation." *Evaluation Quarterly,* 1 (1977): 499-500.

Crandall, D. P., and Harris, R. C. *Views on the Utilization of Information by Practitioners.* Andover, MA: The Network, September, 1978.

Cronbach, L. J. *Essentials of Psychological Testing.* New York: Harper and Brothers, 1949.

Datta, L. E. "The New Congressionally Mandated Studies: Notes Toward Species Identification." Paper presented for the American Educational Research Association meeting in Toronto, March 27-31, 1978.

Datta, L. E. "Does It Work When It Has Been Tried? And Half Full or Half Empty?" In *Evaluation Studies Review Annual*, Vol. 2, pp. 301-319. Beverly Hills, CA: Sage Publications, 1977.

Datta, L. E., and Perloff, R. *Improving Evaluations.* Beverly Hills, CA: Sage Publications, 1979.

Davis, H. R., and Salasin, S.E. "The Utilization of Evaluation." In *Handbook of Evaluation Research.* Edited by E. L. Struening and M. Guttengag. Vol. 1, pp. 621-666. Beverly Hills, CA: Sage Publications, 1975.

Dickey, B. "Utilization of Evaluations of Small-scale Innovative Educational Projects," *Educational Evaluation and Policy Analysis*, Vol. 2, No. 6. November-December, 1981. pp. 65-77.

Diekman, J. R. *Get Your Message Across.* Englewood Cliffs, NJ: Prentice-Hall, Inc., 1979.

Dewey, J. *How We Think.* Boston: D. C. Heath and Company, 1933: 106-118.

Duncan, R. B. "Criteria for Type of Change-agent in Changing Educational Organizations." Paper presented at AERA, Chicago, IL, April, 1972.

Duncan, W. J. *Decision Making and Social Issues.* Hinsdale, IL: Dryden, 1973.

Ebert, R. J., and Mitchell, T. R. *Organizational Decision Processes.* New York: Crane, Russak and Company, 1975.

Edwards, W., and Tversky, A. *Decision Making.* Middlesex, England: Penguin Books LTD., 1967.

Eidell, T. L., andKitchel, J. M. *Knowledge Production and Utilization in Educational Administration.* Eugene, OR: The Center for the Advanced Study of Educational Administration, 1969.

English, H. B., and English, A. C. *A Comprehensive Dictionary of Psychological and Psychanalytical Terms: A Guide to Usage.* New York: David McKay,1958.

EPIC Evaluation Center. *Needs Assessment.* Tucson, AZ: Educational Innovators Press, 1970.

Fainstein, N. I., and Fainstein, S. S. "Innovation in Urban Bureaucracies: Clients and Change." *American Behavioral Scientist*, 15, No. 4 (1972).

Franchak, S. J., and Spirer, J. E. Evaluation Handbook Volume 1: *Guidelines and Practices for Follow-Up Studies of Former Vocational Education Students.* Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University, 1978.

Fullen, M. *Problems of Curriculum Implementation.* Ithaca, NY: Cornell University, Institute for Occupational Education, 1978.

Gerhardt, E., and Miskel, C. "Staff Conflict, Organizational Bureaucracy and Teacher Satisfaction." Paper presented at AERA. Chicago, IL, 1972.

Giandomenico, M., and Quade, E. S., eds. *Pitfalls of Analysis.* New York: John Wiley,1980.

Good, C. V., ed. *Dictionary of Education.* 2nd ed. New York: McGraw-Hill, 1959.

Gowers, S. E. *Plain Words: Their ABC.* New York: Alfred A. Knopf, 1955.

Guba, E. G. "Programs in Utilizing the Results of Evaluation." *Journal of Research and Development in Education*, 8, No. 3, 1975: 42-54.

Guba, E. G. "A Diffusion Mechanism for the Center for Vocational and Technical Education." Paper for the Center for Vocational and Technical Education, The Ohio State University, 1971.

Guba, E. G. "The Failure of Educational Evaluation." *Educational Technology,* 9, No. 5, 1969: 29-38.

Halpert, H. P. "Communications as a Basic Tool in Promoting Utilization of Research Findings." In *Program Evaluation in the Health Fields.* Edited by H. Shoulbert, A. Sherdon, and F. Kaker. New York: Behavioral Publications, 1969: 497-505.

Harrell, R. L. *The POINT PLAN: A Strategy for Bringing about Change.* College Station, TX: Innovative Resource, 1968.

Havelock, R. C. *A Workbook of Checklists to Accompany the Change Agents Guide to Innovation in Education.* Ann Arbor, MI: University of Michigan, Center for Research on Utilization of Science Knowledge, Institute for Social Research, 1973.

Havelock, R. G. *Planning for Innovation Through Dissemination and Utilization of Knowledge:* Ann Arbor, MI: University of Michigan, Institute for Social Research, 1969.

Havelock, R.G., and Lingwood, D.A. *Research and Development Utilizational Strategies and Functions: An Analytical Comparison of Four Systems.* Ann Arbor, MI: University of Michigan, Center for Research in Utilization of Science Knowledge, Institute for Social Research, 1973.

Hayman, J.; Rayder, N.; Stenner, A. J.; and Madey,D. C. On Aggregation, Generalization, and Utility in Educational Evaluation. *Educational Evaluation and Policy Analysis,* 1, No. 4 (1979): 31-39.

Hitt, W. D. "Managing the School System." Knowledge and Action, Columbus, Ohio: Battelle Center for Improved Education.

Holley, F. M. "Evaluation Utilization: Is It Easier to Move a Mountain than a Molehill?" Paper presented at the American Educational Research Association annual meeting, Boston, MA: April, 1980.

Holley, F. M. "The Role, Importance, and Problems of Local/State Evaluation in Educational Development." Unpublished report, Austin, TX: Office of Research and Evaluation, Austin Independent School District, 1980.

Holley, F. M. et al. *A Communication Handbook for Researchers and Evaluators.* Austin, TX: Austin Independent School District, 1979.

Holley, F. M.; Davidson, J. L.; Lee, A. M.; and Matuzek, P. "Models for the Delivery of School District Evaluation: Service or Accountability." Paper presented at the annual meeting of the American Educational Research Associates, April 1976.

Holley, F. M., and Ligon, G. "Time: Today it translates to dollars." *Educational Evaluation and Policy Analysis,* 1979, 1 (3), 109-112.

Huff, D. *How to Lie with Statistics.* New York: W. W. Norton and Company, 1954.

Hull, W. L., and Kester, R. J. *Perceived Effectiveness of Innovational Diffusion Tactics.* Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University, 1975.

Hull, W. L.; Kester, R. J.; and Martin, W. B. *A Conceptual Framework for the Diffusion of Innovations in Vocational and Technical Education,* Columbus, OH: The Center for Vocational and Technical Education, The Ohio State University, March 1973.

Hull, W. L., and McCaslin, N. L. *Career Education Implementation: A Handbook for Strategy Development.* Columbus, Ohio: The Center for Vocational Education, The Ohio State University, December 1977.

Hull, W. L., and Wells, R. L. "The Classification and Evaluation of Innovation in Vocational and Technical Education," Research Series No. 71. National Center for Research in Vocational Education, The Ohio State University.

Intergovernmental Task Force Information Systems. *The Dynamics of Information Flow.* Washington, DC: HEW/USOE, April 1968.

Jackson, J. H., and Keaveny, T. J. *Successful Supervision.* Englewood Cliffs, NJ: Prentice-Hall, Inc., 1980.

Kapes, J. T., and Mason, S. L. *Dissemination of Vocational Development Research.* Harrisburg, PA: Pennsylvania Department of Education, Research Coordination Unit, 1976.

Katz, E.; Levin, M. L.; and Hamilton, H. "Traditions of Research on the Diffusion of Innovation." *American Sociological Review* 27 (1963): 237-252.

Kaufman, R. A., and Corrigan, R. E. *An Exercise in the Analysis of Planned Change in Education.* Burlingame, CA: Operation PEP, A Statewide Project to Prepare Educational Planners for California, 1967.

Kelman, H. C. "Compliance, Identification and Internalization: Three Processes of Attitude Change. *Journal of Conflict Resolution,* 2 (1958): 51-60.

Kendall, M.; and Buckland, W. R. *A Dictionary of Statistical Terms.* 3d edition. New York: Hafner Publishing Company, 1971.

Kerlinger, F. N. *Foundations of Behavioral Research.* 2nd edition. New York: Holt, Rinehart and Winston, Inc., 1973.

Krathwohl, D. R. "The Evaluator as Negotiations Facilitator—Fact Finder." Educational Evaluation and Policy Analysis 2, 2 (1980).

Krippendorff, K. *Content Analysis: An Introduction to Its Methodology.* Beverly Hills, CA: Sage Publications, 1980.

Lin, N., Leu, D., Rogers, E., and Schwartz, D. *The Diffusion of an Innovation in Three Michigan High Schools: Institution Building through Change.* East Lansing, MI: Michigan State University, Institute for International Studies in Education and Department of Communication, 1966.

Lindbloom, C. E., and Cohen, D. *Useable Knowledge.* New Haven, CO: Yale University Press, 1979.

Lindquist, J., ed. *Increasing the Impact of Social Organizations Funded by Grant-Making Organizations.* Battle Creek, MI: W. K. Kecloge Foundation, 1979.

Lipham, J. M. "Leadership and administration." *Behavioral Science and Educational Administration.* National Society for the Study of Education. 63rd Yearbook, Part II. Chicago, University of Chicago Press, 1969.

Lyons, C.; Doscher, L.; McGranahan, P.; and Williams, R. "Evaluation and School District." Preliminary Report. Los Angeles, CA: Center for the Study of Evaluation, 1978.

MacCrimmon, K. R., and Taylor, R. N. "Decision Making and Problem Solving." In *Handbook of Industrial and Organizational Psychology,* edited by M. D. Dunnette. Chicago: Rand McNally, 197-

Maguire, L. M.; Temkin, S.; and Cummings, C. P. *An Annotated Bibliography on Administering for Change.* Philadelphia: Research for Better Schools, Administering for Change Program, October, 1971.

Magnum, G.; Morlock, J.; Snedeker, D.; and Pines, M. W. *Job Market Futurity: Planning and Managing Local Manpower Programs.* Salt Lake City, UT: Olympus Publications Company, 1979.

Mann, J. *Changing Human Behavior.* New York: Charles Scribner's and Sons, 1965.

McCaslin, N. L.; McKinney, F. L.; and Gaber, U.B. Review of Vocational Education Evaluation Reports. Columbus, OH: National Center for Research in Vocational Education, The Ohio State University, 1979.

McCracken, J. D., and Gillespie, W. B. *Information Utilization in Vocational Education.* Columbus, OH: National Center for Research in Vocational Education, The Ohio State University, 1973.

Mercer, J. L., and Koester, E. H. *Public Management Systems.* New York: American Management Association, 1978.

Merz, H.; Starr, H.; Cohen, S.; Jahnke, J. J.; Maurice, C.; Zanhiser, G.; and Bowers, E. *Improving the Technology of Local Level Vocational Education Planning.* Columbus, OH: National Center for Research in Vocational Education, The Ohio State University, 1981.

Miles, M. B., ed. *Innovations in Education.* New York: Columbia University, Teachers College, 1964.

Moser, C. A., and Kalton, G. *Survey Methods in Social Investigation.* New York: Basic Books, 1972.

Mushkin, E. "Evaluations: Use with Caution. *Evaluation.* 1, No. 2 (1973): 31-35.

Neilsen, V. G. "Why Evaluation Does not Improve Program Effectiveness." *Policy Studies Journal,* 3, No. 4 (1975): 385-390.

Nevo, D., and Stufflebeam, D. L. "The Availability and Importance of Evaluation Information within the School." *Studies in Educational Evaluation* 2, No. 3 (1976): 203-210.

Newman, D. L.; Brown, R. D.; and Littman, M. "Evaluator Report and Audience Characteristics Which Influence the Impact of Evaluation Reports: Does Who Says What to Whom Make a Difference?" *CEDR Quarterly* 12, No. 2 (1979): 14-18.

Nikolai, I. *Definition of Selected Research and Development Terminology: A Perspective.* Albuquerque: Southwestern Cooperative Educational Laboratory, January 1972.

Norton, R. E. "Local Program Evaluation as a Change Strategy." Paper presented at AVA, Portland, 1971.

O'Reilly, P. A., and Asche, F. M. *Follow-up Procedures: A National Review.* Blacksburg, VA: Virginia Polytechnical Institute, 1979.

Patton, M. *Utilization-focused Evaluation.* Beverly Hills: Sage Publications, 1978.

Pillemer, D. B., and Light, R. J. "Synthesizing Outcomes: How to Use Research Evidence from Many Studies." *Harvard Educational Review,* 50, No. 2 (1980): 176-195.

Pincus, J. "Incentives for Innovation in the Public Schools." *Review of Educational Research,* 22, No. 1 (1974): 113-144.

Popham, W. J., ed. "An EEPA Interview with Daniel L. Stufflebeam." *Educational Evaluation and Policy Analysis,* 2, No. 4 (1980): 85-90.

Porter, G. W. *Data Needs in Vocational Education.* Raleigh: Center for Occupational Education, March 1976.

Purdy, R. "Public and Innovation." *Educational Leadership,* 25, No. 4 (1968): 296-299.

Raiffa, H. *Decision Analysis.* Reading: Addison-Wesley Publications Company, Incorporated, 1970.

Rhodes, L. "Linkage Strategies for Change: Process May Be the Product." *Phi Delta Kappan,* 51, No. 4 (1969): 204-207.

Robinson, W. S. "Ecological Correlatons and the Behavior of Individuals." *American Social Review* (1950): 351-356.

Rogers, E. M. *How Farm People Accept New Ideas.* North Central Rural Sociology Subcommittee on the Diffusion of Farm Practices. Report 15. Ames: Iowa Agricultural Extension Service, 1955.

Rogers, E. M. *Diffusion of Innovations.* New York: The Free Press, 1962.

Rogers, E. M., and Shoemaker, F. F. *Communication of Innovations: A Cross-Cultural Approach.* 2d ed. New York: The Free Press, 1971.

Rosenau, F.; Hutchins, L.; and Hemphill, J. *Utilization of NIE Output.* Berkeley: Far West Lab for Educational Research and Development.

Rossi, P. H., and Wright, S. R. "Evaluation Research: An Assessment of Theory, Practice, and Politics." *Evaluation Quarterly,* 1, No. 1, February 1977.

Sabine, C. D., ed. *Accountability: Systems Planning in Education.* Homewood: ETC Publications, 1973.

Salasin, S. "Hearings on the Cost, Management and Utilization of Human Resources Program Evaluation: Summaries of the Testimony. *Evaluation,* Special Issue (1978): 10-18.

Schulberg, H. C., and Jerrell, J. M., ed. *The Evaluator and Management.* Beverly Hills: Sage Publications, 1979.

Shannon, C., and Weaver, W. *The Mathematical Theory of Communication.* Urbana: University of Illinois Press, 1949.

Sheldon, M. S., and Hunter, R. "Statewide Longitudinal Study. Report on Academic Year 1978-1979. Part II—Spring Results." Los Angeles: Los Angeles Pierce College, 1980.

Shye, S., ed. *Theory Construction and Data Analysis in Behavioral Sciences.* San Francisco: Jossey-Bass, 1978.

Sieber, S. D., Louis, K. S., and Metzger, L. *The Use of Educational Knowledge.* New York: Bureau of Applied Social Research, Columbia University, September 1972.

Simon, H. A. *The New Science of Management Decision.* New York: Harper and Row, 1960.

Simmons, W. D. *Dissemination Guidelines.* Urbana: University of Illinois, Dissemination Project, 1968.

Smith, N. L. *Bibliography on Evaluation Utilization, No. 39.* Portland: Northwest Regional Educational Laboratory, August 1980.

Smith, H. P., and Brouwer, P. J. *Performance Appraisal and Human Development: A Practical Guide to Effective Managing.* New York: Addison-Wesley Publishing Company, 1967.

Sonquist, J. A. *Multivariate Model Building: The Validation of a Search Strategy.* Ann Arbor, MI: Institute for Social Research, 1970.

Souder, W. E. *Management Decisions Methods for Managers of Engineering and Research.* New York: Van Nostrand Reinhold Company, 1980.

Speiss, M. "The Effect of Four Communication Variables on the Utilization of Evaluation Conclusions in Decision Making." Unpublished dissertation, Faculty of Educational Development, The Ohio State University, 1973.

Starr, H.; Maurice, C.; Black, M.; and Keller, P. *Selecting, Analyzing, and Displaying Planning Information.* Columbus, OH: National Center for Research in Vocational Education, The Ohio State University, 1979.

Starr, H.; Merz, H.; Thrane, L. C.; Jahnke, J. J.; Cohen, S.; Maurice, C.; and Bowers, E. *Conditions Affecting Vocational Education Planning: Implications for Administration and Research.* National Center for Research in Vocational Education, The Ohio State University, 1981.

Stevens, W. F., and Tornatzky, L. G. "The Dissemination of Evaluation: An Experiment." *Evaluation Review,* 4, No. 3, June, 1980, pp. 339-354.

Stufflebeam, D. L. "Programmatic Change. A Draft." Paper presented at AVA, New Orleans, 1970.

Stufflebeam, D.; Foley, W. J.; Gephart, W. J.; Guba, E. G.; Hammond, L. R.; Merriman, H. O.; and Provus, M. M. *Educational Evaluation and Decision Making in Education.* Itasca, IL: F. E. Peacock, 1971.

Sutherland, J. W. *Administrative Decision Making.* New York: Van Nostrand Reinhold Co., 1977.

Swanson, C. J. A nationwide study of the administration of voational-technical education at the state level. Final Report. Volume II. Washington, DC: HEW/USOE, August 1967.

Walker, J. P. "Installing an Evaluation Capability in an Educational Setting: Barriers and Caveats." Paper presented to Division H, The American Educational Research Association, Chicago, IL: 1972.

Warren, D. I. "The Effects of Power Bases and Peer Groups on Conformity in Formal Organizations." *Administrative Science Quarterly,* 14 (1969): 544-556.

Webster's Seventh New Collegiate Dictionary. Springfield, MA: G. and C. Merriam, 1965.

Webster, W. J., and Holley, F. M. "A Position Paper and Recommendations Proposed by the Texas Joint Urban Evaluation Council for a State-supported Research and Evaluation System for Texas School Districts," 1974.

Webster, W. J., and Stufflebeam, D. L. "The State of Theory and Practice in Educational Evaluation in Large Urban School Districts." Unpublished manuscript.

Weeks, E. C. "Factors Affecting the Utilization of Evaluation Findings in Administrative Decision Making. Unpublished Ph.D. dissertation. University of California, Irvine, 1979.

Weiss, C. H., ed. *Using Social Research in Public Policy Making*. Lexington, MA: Lexington Books, 1977.

Weiss, C. H. "Utilization of Evaluation: Toward Comparative Study." In *Evaluating Action Programs: Readings in Social Action and Education*, edited by C. H. Weiss. Boston, MA: Allyn and Bacon, 1972.

Weiss, C. H. "Utilization of Evaluation: Toward Comparative Study." Presented at the American Sociological Association Annual Meeting, Miami Beach, FL: September 1, 1980.

Williams, Walter. "The Capacity of Social Science Organizations to Perform Large-scale Evaluative Research." In *Evaluating Social Programs. Theory, Practice, and Politics*. New York: Seminar Press, 1972.

Wright, S. R. *Quantitative Methods and Statistics. A Guide to Social Research*. Beverly Hills, CA: Sage Publications, 1979.

Young, R. C. "Goals and Goal-setting." *Journal of American Institute of Planning*, March, 1966, pp. 76-85.

Zaltman, G.; Duncan, R.; and Holbek, J. *Innovations and Organizations*. New York: John Wiley and Sons, 1973.

Zaltman, G.; Florio, D. H.; and Sikorski, L. A. *Dynamic Educational Change: Models, Strategies, Tactics, and Management*. New York: The Free Press, 1977.

Zweig, F. M. *Evaluation in Legislation*. Beverly Hills, CA: Sage Publications, 1979.

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