4. Types of objectives (motor performance, verbal, and discrimination)

5. Taxonomy of objectives (cognitive, affective, and psychomotor domains)

IMPLEMENTATION NEEDS

A professional person with a broad knowledge of and practical experience in the area of behavioral objectives would be needed to present this program and, more especially, to answer questions related to it. Also needed would be an overhead projector. The presentation could be made in approximately an hour's time.

SPECIAL FEATURES

The content of this program is broad-based, encompassing a wider range of material than many other models.

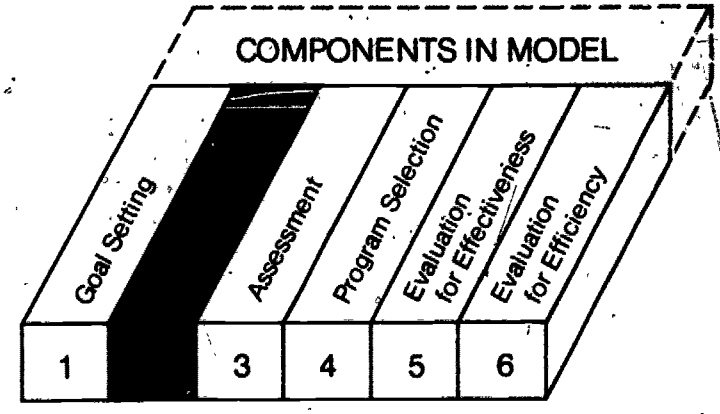
Writing Instructional Objectives

Developers:
Caroline Metheny Dillman
Harold F. Rahmlow

Source:
Fearon Publishers
Lear Sigler, Inc.,
Education Division
6 David Drive
Belmont, Ca. 94002

Cost:
$2.50/book

Copyright:
Yes, 1972



OVERVIEW:

Written primarily for teachers, the main thrust of this book, as the title indicates, is the writing of instructional objectives. The authors' goals are as follows:

1. To acquaint the reader with resource materials on objectives and suggest ways they might be used.
2. To list and explain useful points to be considered when writing objectives.
3. To explain the importance of and a technique for writing test items for objectives.
4. To present varying viewpoints on the use of verb forms most commonly used for objectives.
5. To discuss style technicalities.
6. To illustrate steps in how an objective is developed from rough draft form to an acceptable finished product.
7. To give some original objectives and provide opportunity for revision and evaluation.

PROCEDURE:

This model was designed for use by the individual. Although suggested references are given, this book provides very little

background reading, as the authors presume the reader has already done research previous to his encounter with this particular program.

The following is the checklist for objectives suggested by Dillman and Rahmlow:

1. Level of specificity: Is the objective too specific or too broad?
2. Principal performance: Is the skill called for in the objective the principal performance sought, or is it an indicator behavior?
3. Overt behavior: Is the behavior observable and can it be evaluated?
4. Method or process: Has the method, if it is important, been specified?
5. Evaluation or performance criteria: Are criteria for evaluation included in the objective?
6. Relevant conditions: Have any relevant conditions been included?
7. Student-directed performance: Is the objective directed to the student?
8. Appropriate reading level and vocabulary: Is the objective written in appropriate vocabulary at an appropriate reading level?

Also included is a sample checklist for test items.

Using the suggested worksheet, this is the step-by-step procedure for the actual writing of the objectives:

1. Jot down the general idea for an objective.
2. Write on the worksheet a first rough draft.
3. Write a sample test item.
4. Use the checklist to review the objective.
5. Review the sample test item.
6. Copy the corrected second draft in the space provided on the worksheet.
7. Read over the final version, making any necessary editorial and grammatical changes.

Twenty-five sample objectives are given for revision by the reader. These samples deal mainly with subject content (cognitive), rather than the affective or psychomotor domain, and range in level from first grade through adult education.

IMPLEMENTATION NEEDS:

Extra duplicated copies of the sample worksheet might be helpful in conducting this program. A coordinator or leader might be useful in helping the participants evaluate their performance in the practice exercises.

SPECIAL FEATURES:

An element of humor is used to emphasize some important points.

Writing Performance Objectives

A Programmed Course for the Writing of Performance Objectives

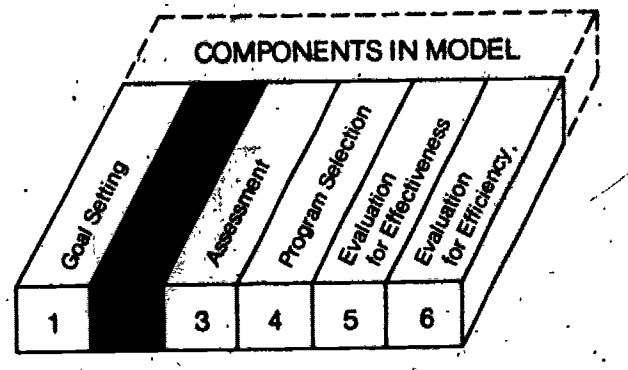
Instructor's Manual for Teachers and Administrators

Developer:
Program Development Center
of Northern California
Butte County Schools Office
Chico, Ca. 95926

Source:
Commission on Educational
Planning
Phi Delta Kappa, Inc.
P.O. Box 789
Bloomington, In. 47401

Cost:
Model is Part II of PDK
Goal Setting Kit $3.00.

Copyright:
No (1972)



OVERVIEW:

This two-manual program, extensive and somewhat technical, is written primarily for classroom teachers and their instructor. One booklet contains programmed material for participants and the other contains background material, lesson plans for group meeting, worksheets, and other essential information for the instructor.

Upon completion of the program, the participants will be able to do the following:

1. Identify 2 terms: goal statements and similar goals.
2. Identify the 3 parts of a performance objective.
3. Write 5 performance objectives.
4. Write cognitive objectives.
5. Recognize psychomotor objectives.
6. Recognize and write affective objectives.
7. Recognize and write 3 levels of performance objectives.

PROCEDURE:

This program, to be completed in four weeks, includes independent and group activities which are designed to improve one's skill in writing performance objectives. Between each of the four consecutive weekly meetings, the participants are required to work independently through the programmed material contained in the student's booklet. Listed on the next page are the procedures to be followed:

Meeting 1 - Orientation meeting in which the instructor will outline procedures to be followed and to present the rationale for using performance objectives.

Independent Activity 1 - Complete Frames 1 through 34 of the Programmed Material.

Meeting 2 - A critique of the objectives participants have written and group discussion and instruction.

Independent Activity 2 - Complete Frames 35 through 115 in the booklet.

Meeting 3 - Critique of the objectives participants have written and group discussion and instruction.

Independent Activity 3 - Complete Frames 116 through 136.

Meeting 4 - (Concluding meeting) Similar in format to the preceeding meetings.

The pages following the programmed items include 6 assignments. They were designed to be completed during training sessions.

IMPLEMENTATION NEEDS:

A booklet is required for each participant in this program, and a manual is needed for each instructor. A series of four consecutive weekly meetings, approximately an hour and a half to two hours in length, is required to execute this course of study, as well as independent time between each meeting for the participants to work on the programmed material. Professional personnel, proficient in the area of performance objectives, is essential to conduct the four structured meetings.

SPECIAL FEATURES:

Unlike many other models, this program is a blending of group and individual activities. Clear directions are given for both types of activities.

Writing and Using Behavioral Objectives

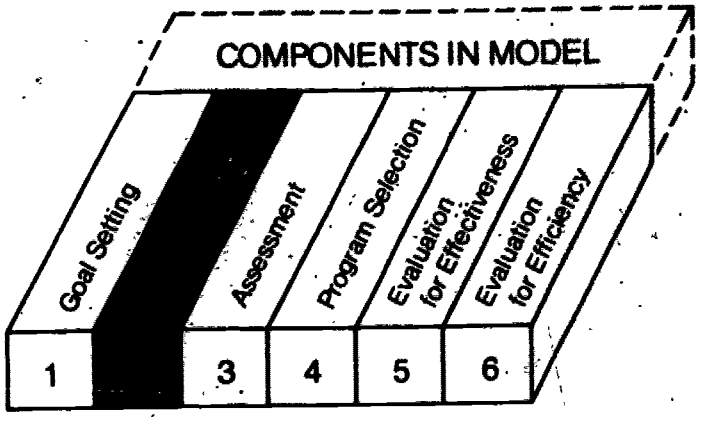
A Learning Packet for Teachers, Students, and Administrators

Developers:
Sam Leles
Raymond Bernabei

Source:
University Supply Store
University of Alabama
34586

Cost:
$3.50

Copyright:
Yes (Lern Associates)
1972



OVERVIEW:

Teachers (in-training and in-service), supervisors, curriculum directors, and administrators are the professionals for whom this program was written. It was designed to aid participants in thinking about objectives and to grapple with ways in which objectives may be utilized for meaningful selections of content, methods, materials, and evaluation procedures. This packet was written to help the reader learn the following:

1. **How to identify meaningful objectives.**
2. **How to write meaningful objectives.**
3. **How to use meaningful objectives.**

PROCEDURES:

In order to facilitate the meeting of the objectives of this program, approximately 25 pages of background material are given. It includes information on the development of the use of behavioral objectives, the cognitive, affective, and psychomotor domains, and four basic characteristics of behavioral objectives. This information is followed by numerous practice exercises designed to reinforce skill in identifying, writing, and using meaningful objectives. A pretest and posttest are included to determine the participant's gain.

The packet culminates in a buzz session which requires participants (organized into small groups of 5 to 7 members) to translate theory into practive and, more specifically, to write and to use objectives. A method for the selection of group leaders and recorders is outlined.

Following the buzz session, all participants meet together and the group recorders are asked to share the results of their group discussions.

IMPLEMENTATION NEEDS:

The authors give no indication as to the anticipated time required to complete this packet. Although the time factor would vary according to how this booklet is used, several hours would be a minimum estimate. Someone would be needed to organize the small groups for discussion and to lead the concluding session in such a way that it is a meaningful experience for the participants.

SPECIAL FEATURES:

This program, like few others, includes individual activities, as well as, small and large group activities.

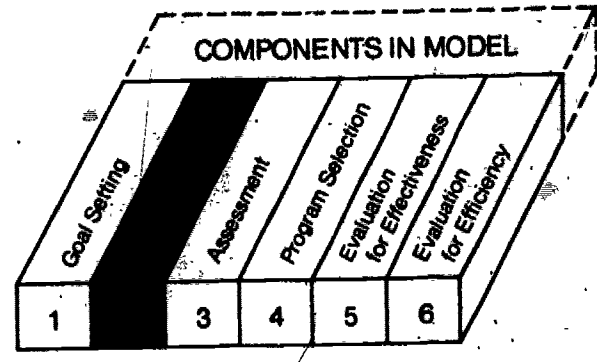
Writing Worthwhile Behavioral Objectives

Developer:
Julie S. Vargas

Source:
Harper/Row, Publishers Inc.
49 East 33rd Street
New York, N. Y. 10016

Cost:
Contact publisher.

Copyright:
1972



OVERVIEW:

This is a self-instructional book designed to help you write worthwhile, behaviorally stated teaching objectives that will increase the values of your courses and their relevance to your students' life outside school. It does not teach how to write objectives for attitudes (though the topic is considered briefly); it is restricted to what is often called the cognitive domain:

After completing the book the user should be capable of:

1. selecting from a list of ten to twenty objectives the five that are the most behavioral.
2. telling which of the necessary criteria (referring to the behavior of the student, describing observable behavior, and specifying a level of criterion of acceptable performance) a given objective meets or fails.
3. revising nonbehavioral objectives.
4. writing behavioral objectives for general objectives or test items.
5. classifying given objectives in the major categories of Bloom's taxonomy of educational objectives.
6. replacing what Bloom calls "knowledge level objectives" with objectives that fall in the higher categories of Bloom's taxonomy.

7. given a textbook chapter, writing objectives for a unit using that chapter.

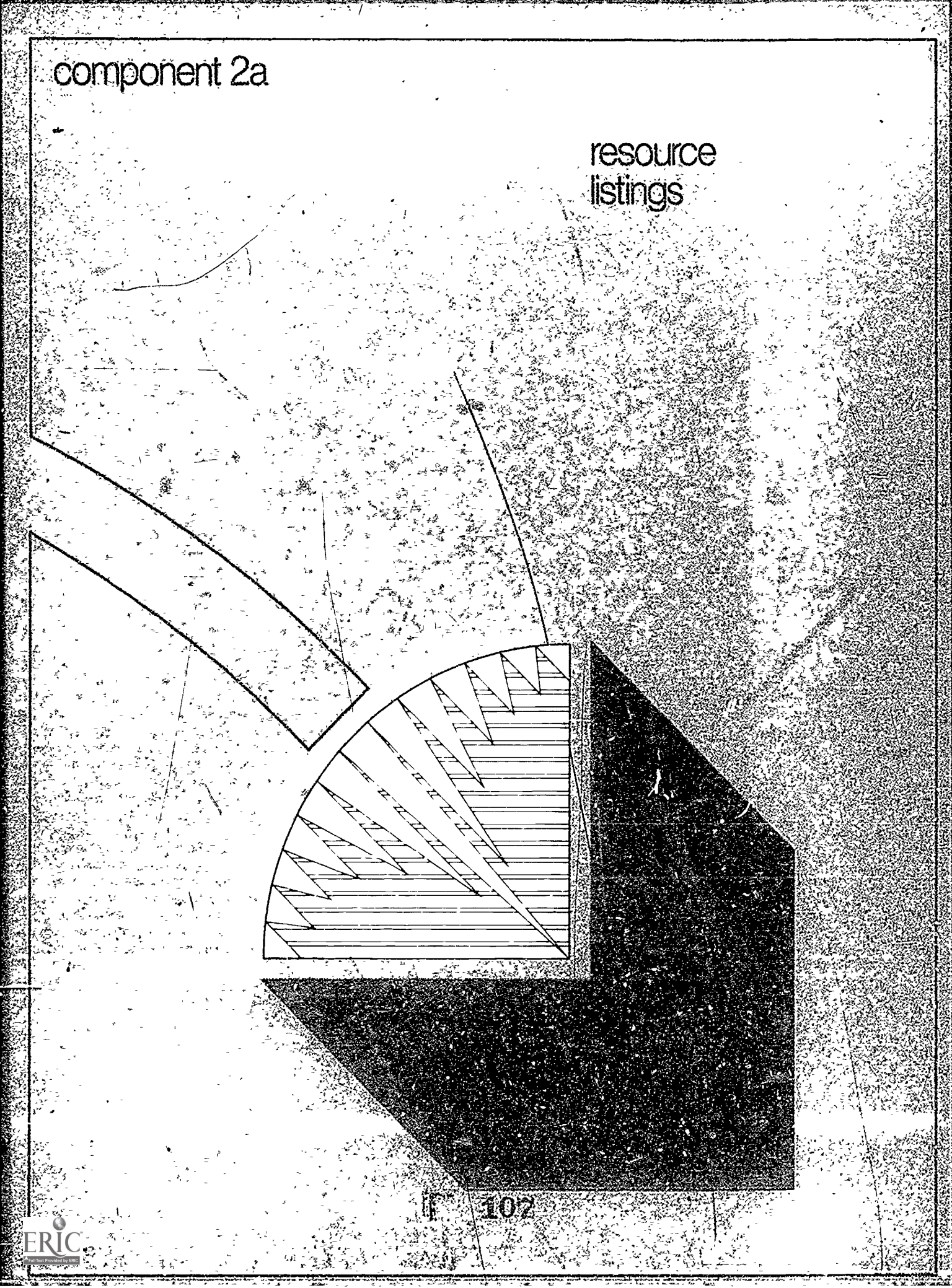
The unit should have all levels of Bloom's taxonomy represented.

PROCEDURES:

This book contains both text and exercises. The text presents the arguments for quality objectives; the exercises teach you how to write them. To avoid unnecessary practice, each chapter of exercises begins with a pretest covering the skills taught. If you score 90 percent or better on the pretest, you may skip the chapter and go on to the next. If you score less than 90 percent, then you are expected to do the exercises. And, of course, you can work through the book at your own speed.

component 2a

resource listings



C.S.E. Hierarchial Objectives Charts

Source: Center for the Study of Evaluation
University of California
Los Angeles, California

Cost: $12.00

Copyright: No

CONTENT AND ORGANIZATION

Goals and objectives of elementary school education are outlined in chart form. Forty-one goal areas and one hundred and four sub-goals or objectives have been categorized in a hierarchy. The charts contain objectives ranging from broad goal areas to more specific objectives which lead to but do not include behavioral objectives. The goals cover both cognitive and affective areas and range from such categories as Development of Personality and Social Development to Geometry, Sociology, and Reasoning.

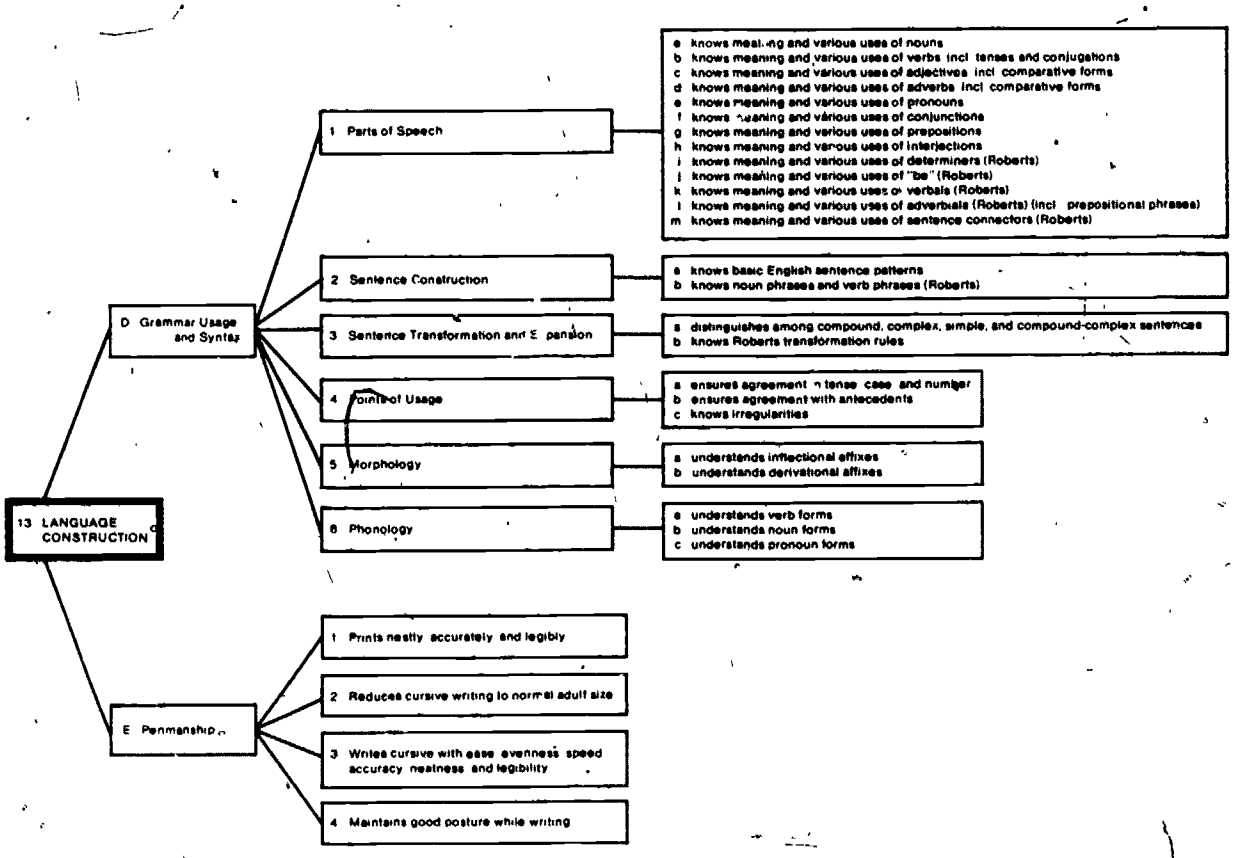
The format of the charts is best described by illustration. (See "Sample Objectives" on next page.)

SPECIAL FEATURES

Higher level thinking skills are covered in these charts as well as affective learnings. In addition, this hierarchical format is not commonly found among the other objectives banks.

The charts may be used in the development of a criterion-referenced evaluation system.

SAMPLE OBJECTIVES: (Format of Ch



DIMOS I

Directory of Sources of Measurable Objectives—First Edition

Developer: Robert H. Pinney

Source: Upper Midwest Regional Educational Laboratory
1640 East 78th Street
Minneapolis, Minnesota 55423

Cost: Contact source.

Copyright: Yes, 1972

CONTENT AND ORGANIZATION:

This model is, as its title indicates, a directory of sources of measurable objectives. Listed in this directory are what sets of objectives have been written, by whom, for what areas of the curriculum, for what intended purposes, and in what format.

This first edition contains a listing of some 150 sets of objectives from a variety of sources. In this manual, these listings are organized into 20 sections as follows:

Agriculture
Art
Business
Distributive Education
English/Reading/Language
Foreign Languages
Health Occupations
Health, Safety, Recreation, and Physical Education
Home Economics
Industrial Arts
Mathematics
Music
Natural Sciences
Office Occupations
Social Sciences
Technical Education
Trade and Industrial
General Elementary/Secondary Education
Handicapped
Co-curricular Activities

Some categories have numerous listings. For several of the groupings listed, however, no sets have yet been located. The information provided is brief and easy to discern, as it is organized in chart form.

SPECIAL FEATURES:

Any individual or group endeavoring to write sets of objectives or reviewing objectives banks would surely find this catalog of value. Its completeness is unique.

Instructional Objectives: A National Compendium

Developers:	Michael G. Kuhn and Lorraine R. Gay State University System of Florida, Tallahassee Florida State Department of Education Division of Elementary and Secondary Education Tallahassee
Source:	ERIC Document #'s ED 062 743 and EC 041 993 c/c Computer Microfilm International Corporation Post Office Box 190 Arlington, Virginia 22210
Cost:	Microfiche $0.65 Hardcopy $6.58
Publication Date:	May 1972
Copyright:	No

CONTENT AND ORGANIZATION:

This compendium is an annotated bibliography of materials containing instructional objectives and of objectives-based materials collected from institutions, school systems, state departments of education, and commercial producers of educational materials. Organization of listings is by topic, grade range, and alphabetical order. A listing of macro-collections, compilations which contain objectives in a number of different areas and many objectives per area, is followed by a listing of micro-collections, which contain objectives in at least three different areas. Other sections list materials containing educational objectives for specific curriculum areas: early childhood, creative arts, language, mathematics, reading, science, social studies, and vocational-technical education. Final sections list sources (bibliographies and reports) containing objectives or references concerning objectives, materials dealing with development and use of objectives, and teacher training materials which consist of or contain instructional objectives. Information given for each entry includes title, grade range, publisher, price, brief description of material, and a list of topics covered in the material.

The Compendium is organized by topic, grade range and alphabetical order. Collections have been divided into MACRO-COLLECTIONS and MICRO-COLLECTIONS. MACRO-COLLECTIONS contain descriptions of compilations (arranged alphabetically) which contain objectives in a number of different areas and which contain many objectives per area. MICRO-COLLECTIONS contain descriptions of collections which contain objectives in at least three different areas. These are arranged alphabetically within intended grade range. Descriptions of objectives in the curriculum areas, e.g. MATHEMATICS, are also arranged alphabetically within grade range, with the exception of VOCATIONAL-TECHNICAL EDUCATION; descriptions in this category are ordered alphabetically by vocational area. SOURCES OF SOURCES contain descriptions of bibliographies and reports which contain either objectives or references concerning objectives; these are arranged alphabetically by title. UTILIZATION OF OBJECTIVES contains descriptions of materials which deal with the development and utilization of instructional objectives, also arranged alphabetically by title. Finally, the TEACHER EDUCATION section contains annotations of available teacher training materials which consist of, or contain, instructional objectives. These are arranged alphabetically, by topic, and by title within topic. SOURCES OF SOURCES, UTILIZATION OF OBJECTIVES, and TEACHER EDUCATION were not originally intended to be sections in the Compendium. However the number of unsolicited entries received warranted their inclusion. Consequently, in contrast to other sections of the Compendium, these three sections are in no way to be considered comprehensive.

Descriptions of materials are presented in the words of the developer whenever possible. Annotations include the title of the materials, the intended grade range (K = kindergarten, P = primary, I = intermediate, JR = junior high, SH = senior high, A = adult, or post-secondary), name and location of the publisher, and the price of the materials when known. Since it would be impossible to relate all important aspects of each reported effort, this summary presents a brief description of the materials and a listing of the topics included. Using this approach, interested persons may examine the annotations in the area or areas of their choice and identify sources of objectives relevant to their needs.

To enhance the usability of this document, the name and address of the contact person for each entry in the Compendium are presented on the page opposite the page on which the entry originates. Although many more persons were contacted, they either

did not respond, did not have materials to contribute, had materials which are not yet available, or responded after the Compendium had been compiled. Late arrivals will be integrated into a revised version at a later date.

SAMPLE ENTRY:

5. PLAN: Master Objectives (K-SH) - Westinghouse Learning Corporation, Palo Alto, Califronia

Description: A program of individualized education in Reading, Language Arts, Mathematics, Science, and Social Studies which can be adapted to each pupil's needs, abilities, interests and goals. The major components of the program are a set of instructional objectives, a variety of study plans to achieve these objectives, and a computer support system to help plan student learning and monitor student progress. Objectives for the Guidance program are also included.

Topics included:

Primary Objectives

Language Arts

- Orientation to PLAN
- Readiness
- Language Arts Skills
- Reading Skills
- Writing

Social Studies

- History
- Sociology
- Geography
- Economics

Science

- Biology
- Psychology
- Physics
- Chemistry
- Geology
- Meterology
- Inquiry Development - Observing/Perceiving
- Inquiry Development - Taxonomic/Classifying
- Inquiry Development - Experimenting

Mathematics

Numerals
Place Value to 9999
Roman Numerals
Addition of 4-digit Numbers
Subtraction of 4-digit Numbers

Multiplication Facts
Division with 1-digit Numbers
Addition of Like Fractions
Patterns of Objects
Functions of a Graph

Geometric Figures
Value of Coins
Time to the Minute
Linear Measure to 1/4 inch
Temperature Readings
Elements of a Set
Set Notation
Number Sentences
Word Problems

Intermediate Objectives

Language Arts

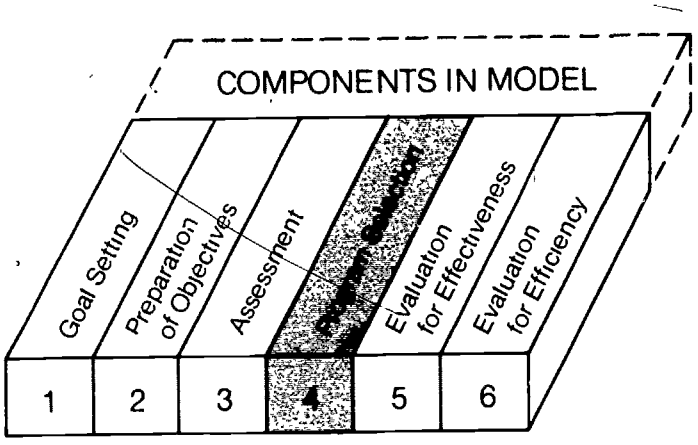
History & Dialectology
Speaking
Reading-Phonetic Analysis & Structural Analysis
Reading-Critical Reading Skills
Reading-Literature & Literary Form
Writing-Correspondence Skills
Listening
Reading-Study Skills
Reading-Organizational Skills
Reading-Interpretation Skills
Writing-Form & Analysis
Writing-Creative Writing
Writing-Structure
Writing-Mechanics
Writing-Study Skills
Non-Verbal Communication

Developer:
Rand Corporation

Source:
Rand Corporation
Santa Monica, Cal.

Cost:
$3.00 8 1/2" x 11"
staple bound documents

Copyright:
1971, 1972



The MODIA reports are an attempt to apply systematic methods of analysis and synthesis to issues and problems in education. The MODIA reports present a systematic process for designing a mix of instructional facilities, materials, and students, and the process by which all of these elements might work together to affect student mastery of subject matter.

The MODIA system consists of a sequence of procedures and semi-automated tools that allow a designer to examine many alternative structural approaches before a system is chosen. The utility of various approaches can be assessed in terms of student outcomes or the consumption of human and material resources.

The MODIA process consists of eight steps:

1. Analyze characteristics of the learner population that will affect the way the course will be taught.
2. Use the Questionnaire for stating General Policy to specify the broad goals underlying the teaching institution's operation.

3a. Use the Curriculum Analysis Questionnaire to classify each lesson in system-oriented terms, and to characterize each lesson's requirements for communication media.

3b. Specify instructional strategies with the help of DISTAF (DETERMINING INSTRUCTIONAL STRATEGIES FOR TRAINING IN THE AIR FORCE). Each strategy identifies the teaching agent and the way students will interact with this teaching mode.
4. Specify design criteria input from the teaching institution, such as least course cost, shortest course length, or maximum student graduation rate.
5. Describe local resources, such as the number of students entering the school and the school's resources and constraints.
6. Design the instruction using as direct inputs information from the Curriculum Analysis Questionnaire, DISTAF, the design criteria, and the local resource description.
7. Analyze the costs to determine the system's time-dependent dollar requirements.
8. As necessary, depending on the acceptability of the outputs, repeat steps 1-7 (with different inputs) until the most desirable system emerges.

The MODIA System was developed to meet specifications of the U.S. Air Force and consequently many of the descriptions don't fit the more general requirements of public education. As a result adaptations to local school situations will be needed. Also the consideration of highly varied strategies will necessitate the utilization of a computer program available from the RAND corporation. The RAND corporation lists the following major tools that must be developed to complete the system: a generalized computer model of student flow, a computer model for estimating resource requirements and a questionnaire for detailing local resources. Obviously such sophistication in computer application in the most involved application would require outside consultation.

Although the decision process is intended to provide input for a semiautomated methodology for designing instructional programs it also:

1. assists the planner in making explicit judgments about what constitutes effective instruction.
2. assists the planner in stating policies that guide school and classroom operations.
3. provides a comprehensive, logically consistent set of decisions that should be considered in planning instruction.
4. provides simple applications of the MODIA system which can be manually employed.

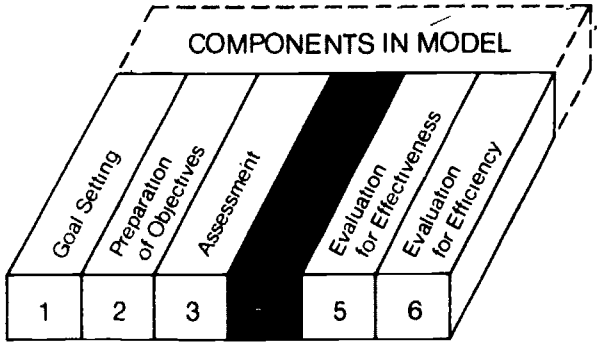
"Pathways to Success"

Developer:
Dorothy Soper; N.J. Office of Program Development

Source:
N.J. Div. of Research, Planning & Evaluation Project Center
1000 Spruce Street
Trenton, N.J. 08638
(609) 292-8454

Cost:
No charge for single copies in New Jersey

Copyright:
No (1974)



This manual was designed to contribute to the selection of successful educational programs developed and validated nationally by schools throughout the nation. The developers have also described it as a "development system" for education. When fully operative local educators will be able to identify local needs for development work, use basic research to design and field test new programs, and make successful programs available to those wishing them.

1) Identification of an educational need for which no program is available in the district; 2) Define results desired; 3) Review existing programs for their applicability; 4) Secure pertinent available materials; 5) Replicate a program developed in other districts for which materials and training are available; 6) Replicate a program developed by other agencies for which materials and training are available; 7) Consult appropriate research; 8) Design, field test, and evaluate a new program; 9) If program is successful, make it available to educators beyond originating district.

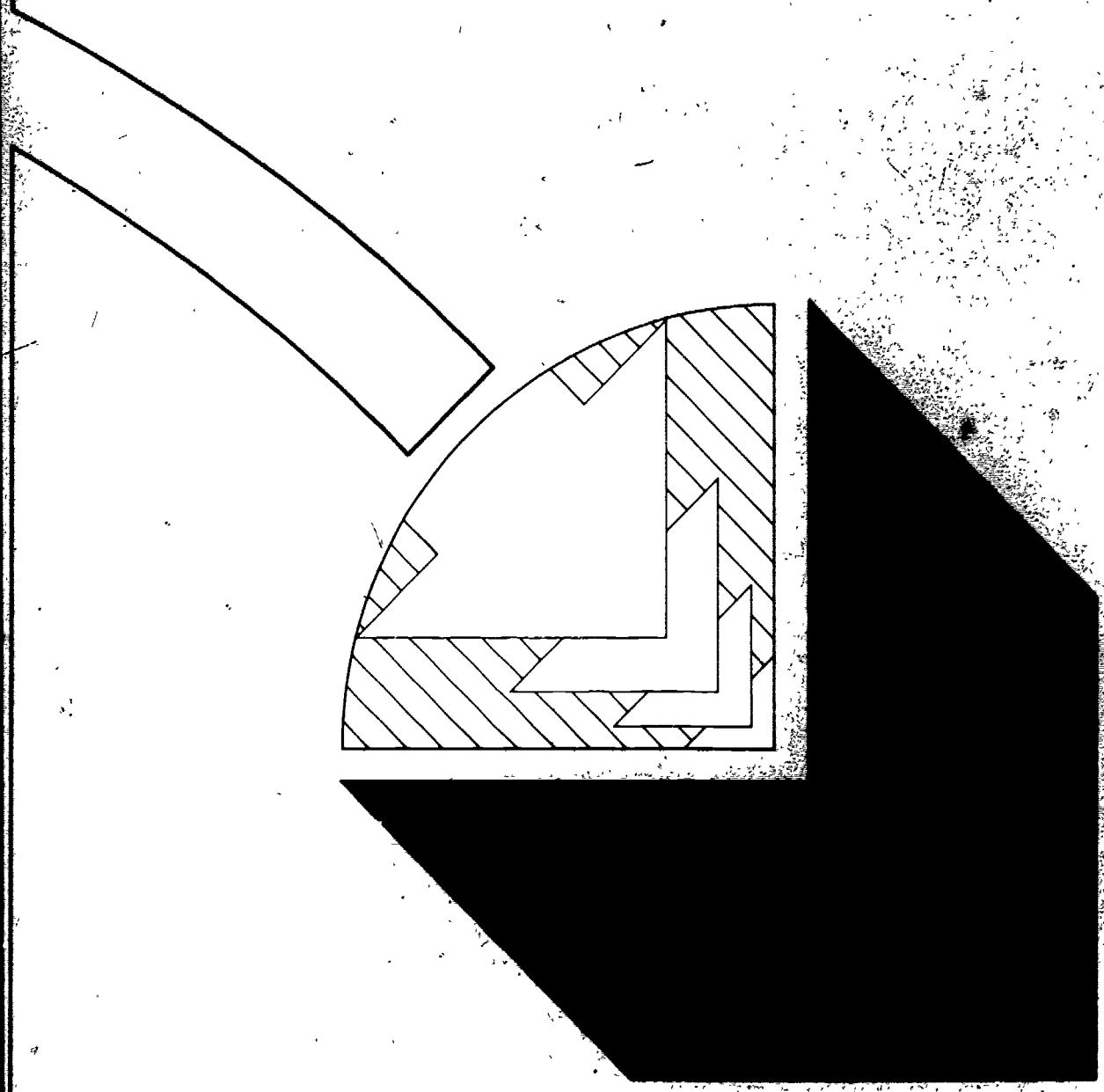
The cycle which produced the innovation is the "how to do it" information that will permit a "consumer" district not only to use a new program or materials, but also to adapt the innovation to the unique requirements of a different situation through an application of the problem-solving process itself. Also, the program must be based on research findings, have specific measureable goals, a precise plan of action, and an evaluation design. The program must have been successful in having met its predetermined goals. A final concern is that the program be cost effective for the consumer district. In other words the costs required to maintain the program and improve performance should not generally exceed existing expenditures.

The consumer district should evaluate the suitability of a program in comparison to its own educational needs, goals, population and resources. This evaluation should indicate appropriateness and feasibility. Also, an adopting district must indicate willingness to submit to evaluation and provide the costs involved in providing time for travel, training, and instructional materials.

The model is a turnkey approach to program implementation. Training in the problem-solving process as related to future educational needs is included.

component 5

models for evaluation

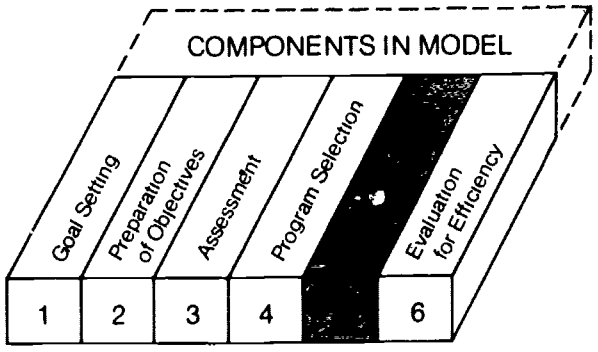


Countenance of Educational Evaluation

Developer:
Robert E. Stake

Source:
Teachers College Record
Vol. 68 #7 April 1967
New York, N. Y. pp. 52-69

Cost:
$4.00 (appears as a Journal article)



This model introduces the multidimensional efforts involved in conducting a full program evaluation. The focus is paroramic rather than microscopic. The broad intent of the model is to discover congruences or contingencies between unstructural intents and student outcomes. A series of matrices are proposed for the collection and judgment of data.

Evaluators work from a series of data matrices. The procedure is to collect and/or prepare such information as is needed under three general headings, i.e., 1) a "description-judgment" matrix including descriptions of instructional intents, interactions or transactions, and outcomes; 2) a matrix for processing descriptive data; and 3) a matrix for making comparisons between programs and standards of excellence, and their resultant judgments. The evaluator's first responsibility is to describe in adequate detail the antecedents (baseline and contributory factors), transactions (teacher-pupil/teacher administrator etc. interactions), and outcomes (both learner and staff) for the project in question. These three levels of data are then placed on a four heading format such that each level of input can be compared (evaluated) relative to intents, observations, standards and judgments. In other words data from the descriptive matrix is juxtaposed with data from a judgment matrix. The

model's author contends that it is the evaluator's responsibility to prepare such objectives as are to be included in the evaluation. Having prepared the descriptive data necessary for intended antecedents, transactions and outcomes, he then enters the corresponding data for observed antecedents, transactions and outcomes. Judgments of congruence are then made. This model also provides for judgments on the logical and empirical contingencies between descriptive and observed data. The final procedure is that of making relative comparisons between:

- Descriptive data from similar programs
- Descriptive data from the project in question
- Standards of excellence/resulting judgments

Also, the model provides distinctives between relative and absolute judgments, and suggests elements for the evaluation design's rationale.

This model is one of the pioneers in the formulation of new approaches to evaluation. While the material is somewhat dated, there are still many strengths to the comparative procedures proposed. The primary usefulness of the model lies in the contribution it makes to the construction of a rationale.

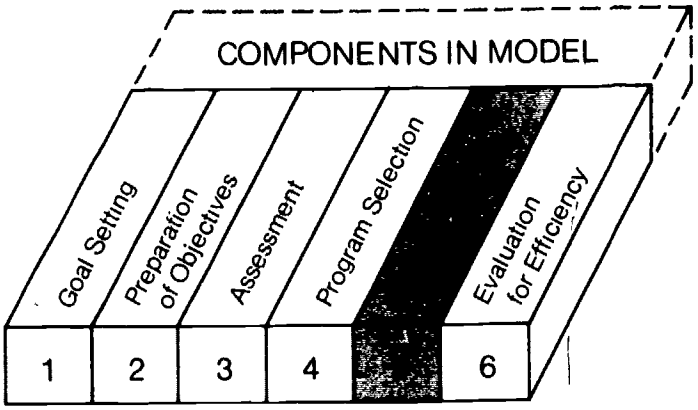
Criterion-Referenced Test Concepts
EPIC Criterion-Referenced Tests

Developers:
E. Wayne Roberson
Allan W. Gibson

Source:
Educational Innovation
Press, P. O. Box 13052,
Tucson, Arizona 85732

Warren Plaza West,
Rt. 130, Hightstown,
N. J. 08520 (Reg. Off.)

Cost:
$2.95 (paperback)
Consultant services
costs vary by contract.



This booklet has been written to assist the reader in the following areas:

1. Defining criterion-referenced tests
2. Reviewing the advantages and disadvantages of criterion-referenced tests
3. Determining how norm-referenced and criterion tests differ
4. Utilizing criterion-referenced results

The booklet is written in response to six questions:

1. What is a criterion-referenced test?
2. How do criterion- and norm-referenced tests differ?
3. What are the advantages and disadvantages of a criterion-referenced test?
4. How are criterion-referenced tests constructed?

5. How are reliability and validity established for criterion-referenced tests?
6. How are criterion-referenced test results reported?

Additionally, EPIC has available criterion-referenced tests that incorporate seven sequential program studies-lists of the basic skills and concepts included in the specific curriculum areas to be assessed. Each skill and concept is tested by four different test items of equal difficulty. These tests are performance objective based, and geared to learners with different test-taking abilities. Standardized test procedures advance in sophistication as the student advances in test-taking ability. The tests are designed to:

- determine what skills and concepts the learner has mastered
- identify needs related to these skills and concepts
- assess performance objectives
- comply with federal program evaluation guidelines

In constructing test items the school district may select items from EPIC's item pool or choose to develop its own items with technical assistance from EPIC consultants.

Domain Referenced Curriculum Evaluation:

A Technical Handbook and a Case History from the MINNEMAST Project

Developers:
Wells Hively, Graham Maxwell, George Rabehl, Donald Sension, Stephen Lundin

Source:
Center for the Study of Evaluation
U.C.L.A.
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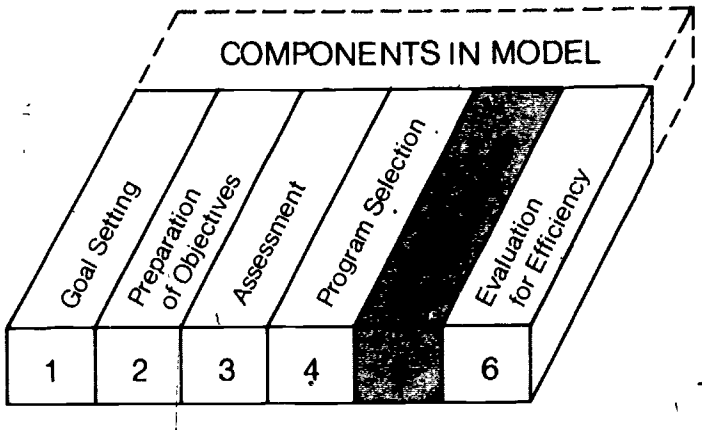
Cost:
Contact Source



This monograph has three interwoven themes. It contains 1) a technical handbook for the application of doamin-referenced test theory to educational evaluation, 2)a case history of the curriculum project in which the technology was developed, and 3) an essay on strategies of educational development and evaluation. By interweaving the three theories, the desire is to illuminate some of the technical and strategic problems of educational development from angles that are hard to represent in shorter theoretical articles or technical reports.

The exposition is as follows: Chapter I gives a brief summary of the history and mode of operation of the Minnesota Mathematics and Science Teaching Project (MINNEMAST). Chapter II treats the rationale that underlines domain-referenced achievement testing and the technology through which it was applied to evaluation of the MINNEMAST Curriculum. Chapter III examines organizational factors that have in the past limited the effectiveness of empirical, formative evaluation in many large-scale curriculum projects and suggests an alternative strategy

for the future. Readers mainly interested in evaluation technology should concentrate on Chapter II. Those whose main interest is in strategies of educational development and evaluation should concentrate on Chapter III, skimming Chapters I and II to put meat on the skeleton of generalities encountered there. Those whose main interest is in the history of the evaluative effort in the MINNEMAST Project should read Chapters I and III, skimming Chapter II. To escape from superficiality, an adequate exposition of domain-referenced curriculum evaluation required a large fund of examples. These have been collected into several appendices. Two particularly important cases can only be made by examining the appendices and are worth emphasizing here. First, that the "item form" approach is not simply a way to operationally define pre-specified goals but is much more fundamentally a way of teasing out and discovering implicit goals. Second, that the power of the "item form" approach lies in the discovery of patterns of student performance that pinpoint the dimensions along which success (or failure) generalizes.

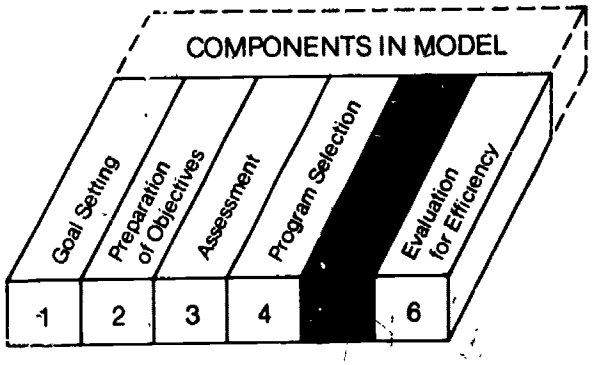
Educational Evaluation and Decision Making

Developers:
Daniel I. Stufflebeam, et al, PDK National Study Committee on Evaluation

Source:
F.E. Peacock Publishers, Inc., Itasca, Illinois

Cost:
$8.50 (hardbound)

Copyright:
1971



OVERVIEW:

This book is one of the products of the Phi Delta Kappan (PDK) National Study Committee on Evaluation which was established for the purposes of: 1) delineating the status of our knowledge about the process of evaluation; 2) collecting, analyzing, and providing critiques of models of evaluation that had been proposed in the past; 3) synthesizing the strengths of existing models into one which had the potential for meeting the demands of the times; and 4) describing that model in language meaningful to the practitioner assigned program evaluation responsibilities.

The general purposes of this book are to deal with the kinds of problems evaluation raises and to devise appropriate solutions. There are four specific objectives:

1) To expose, in detail, five problem areas: definition, decision making, values and criteria, administrative levels, and the research model.

2) To identify and assess extent or emergent formulations that might be used in conceptualizing solutions to these five problems, and to fashion them into tentative solutions.

3) To synthesize a new definition and methodology of evaluation that builds upon the products of objective 2.

4) To provide some operational guidelines for implementing the proposed new approach in terms of personnel, organization, and administration.

This is a book for a variety of audiences directly or indirectly concerned with the art and science of evaluation, including not only the producers and consumers of evaluation but the theoreticians, teachers, consultants, measurements experts, systems analysts, statisticians, data processors, computer specialists, and others who must relate to it in one way or another.

Issues considered included: decision-making behavior of administrators, theoretical formulations of evaluation and decision making, value conflicts, multiple information requirements at different organizational levels, appropriateness of extant research techniques for use in evaluation, the role of evaluation systems, and the training of evaluators. These disparate issues were considered appropriate for consideration in this book, since a comprehensive solution to the many problems which block sound evaluation was being sought.

The analysis and synthesis contained in this book reveal that no single group possesses all of the competencies necessary to provide effective and efficient evaluation. Nothing short of a concerted team effort will do. Administrators, curriculum developers, evaluators, research methodologists, communications experts, theoreticians, philosophers, planners, and educational technologists, among others, must contribute from their special areas of expertise to the solution of evaluation problems.

To be adequate to the overall task, these contributions must be coordinated. Such coordination can be effected through the establishment of special evaluation units in educational institutions. Thus, this book is directed at those who commission the development of evaluation units, operate the units, use the information produced by the units, comprise evaluation teams, produce methods and materials for use in evaluation units, and train staff for work in evaluation units.

PROCEDURES:

The basic procedures of a sound model for educational evaluation are distributed under four major headings and sixteen steps as follows:

1. Planning Decisions -- General Setting

Step I - Awareness (Monitor program to identify needs and opportunities and rank needs and opportunities.)

Step II - Design (Identify alternative conceptions of the problem to be solved and specify the problem selection parameters.)

Step III - Choice (Assess alternative problem statements from different value positions and select the problem.)

Step IV - Action (Assess whether the problem solution will require large or small change and the degree to which information is available to guide the change activity, and specify the objectives.)

2. Structuring Decisions -- Neomobilistic Setting

Step V - Awareness (Enlist the services of the evaluator and identify the structuring questions that follow from the change objective.)

Step VI - Design (Choose a decision model, set problem parameters and devise several solution strategies.)

Step VII - Choice (Assess the alternative strategies and choose the best alternative.)

Step VIII - Action (Perform structured inquiry to assist in programming the chosen change strategy and program the strategy over a long time span.)

3. Implementing Decisions

Step IX - Awareness (Identify and monitor barriers to success and determine when a barrier should be ameliorated.)

Step X - Design (Continue at least one design for modifying the design or procedure.)

Step XI - Choice (Assess proposed change and decide whether or not to use one of the proposed changes.)

Step XII - Action (Adjust the evaluation design and program changes decided upon.)

4. Recycling Decisions

Step XIII - Awareness (Monitor attainments to identify discrepancies between performance and objectives, and determine whether to attend to a discrepancy.)

Step XIV - Design (Conduct structured inquiry and conceptualization to identify possible causes of the discrepancy, determine probable causes, and formulate responses.)

Step XV - Choice (Conduct means-ends analysis, if required, and decide whether to recycle the change procedure.)

Step XVI - Action (Prescribe what changes, if any, are to be effected.)

IMPLEMENTATION:

1. The purpose of the evaluation unit should be described in detail through a specific set of objectives.

2. The evaluation unit should be staffed in accordance with the many roles to be performed in evaluation.

3. Agency policies must be updated to include policy statements governing access to date, dissemination of reports and information, and activities involving unit personnel in their daily operations.

4. Adequate facilities and equipment should be provided for evaluation. Another important characteristic of evaluation units is the equipment and facilities required to implement programs for evaluation.

5. Underfinanced programs providing limited personnel and facilities can only lead to inadequate information for decision making.

6. Eliminate the anxiety symptom by creating a healthy environment for evaluation.

SPECIAL FEATURES:

The book is designed according to the format of the model of evaluation it extends. The content is comprehensive and addresses the practical application of the evaluation model.

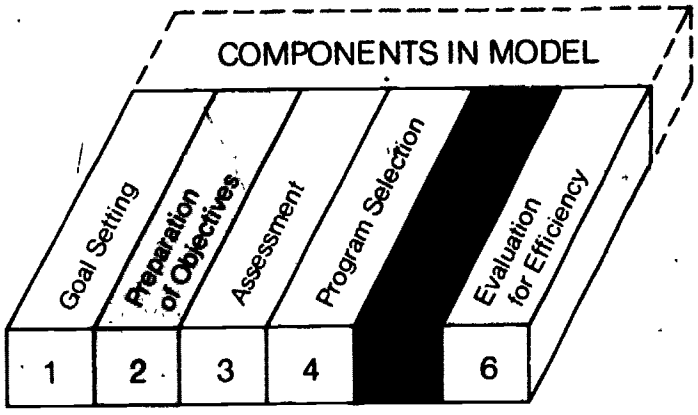
Educational Product Evaluation

Developers:
Bernabei and Lelos

Source:
Leadership Development Training Program in Education, Lern Assoc., Gardy Printing Co. Doylestown, Penna.18901

Cost:
$2.50 (paperback)

Copyright:
1972



OVERVIEW:

This model is a workshop study guide which is appropriate for teachers, supervisors, department heads, and principals who are concerned with the translation of educational goals into precise program objectives that can then be measured and operationalized. Emphasis is placed on three phases of program planning: 1) preliminary stages (planning and assessment), 2) intermediate stage (programming, evaluation, test selection, data collection, and objective refinement), and 3) final stage (mechanics of model development, administrative operations and techniques dealing with "How to do it," and, "How much it costs.")

This model presents the concept of a program development system in terms that are relevant to classroom teachers. Workshop participants are led through each stage of model development with refinement exercises provided in the text materials to translate needs to goals and goals to objectives which are designed to embody measurable performance standards.

IMPLEMENTATION NEEDS:

The model should be implemented through some form of trained leadership to direct and coordinate the workbook exercises. A serious study group, however, could work through the model using only the publication. The self testing exercises throughout