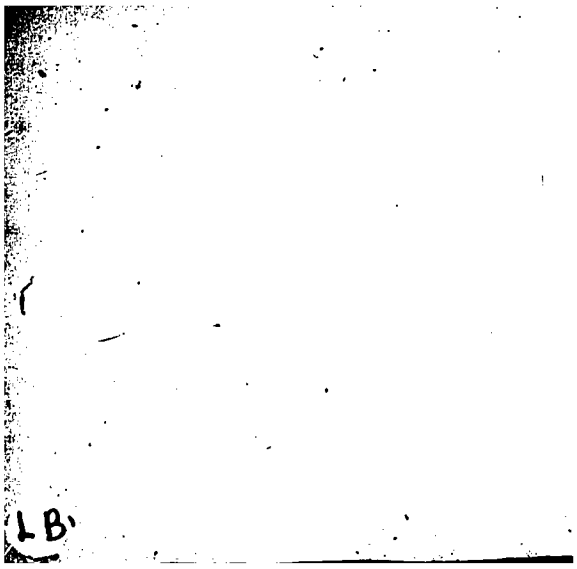

LB

DOCUMENT RESUME

ED 169 389 CE 020 611

AUTHOR Sork, Thomas J.
TITLE Development and Validation of a Normative Process Model for Determining Priority of Need in Community Adult Education.
PUB DATE Apr 79
NOTE 29p.; Paper presented at the Adult Education Research Conference (Ann Arbor, Michigan, April 4-6, 1979)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adult Education Programs; *Community Education; Conceptual Schemes; *Decision Making; *Evaluation Criteria; Evaluation Methods; Models; *Needs Assessment; Objectives; Operations Research; Problem Solving; Program Development; Program Evaluation; Rating Scales; Schematic Studies; *Systems Approach; Validity

ABSTRACT

Research was conducted to develop and gather evidence of validity for a normative process model to be used by community adult education councils in establishing priority among community-level needs. The study design was based on a five-stage problem solving, systems model involving exploration, model building, design and development, validation, and implementation. A prototype process model utilizing a rating scale was developed to determine priorities based on (1) contribution to goals--the goal's importance to the need and the need's contribution to the goal definition, (2) magnitude of discrepancy--discrepancy between the present and valued future situation, (3) immediacy--immediacy of attention the need requires, (4) instrumental value--effect meeting one need has on meeting other needs, (5) resource availability--current resource availability for meeting the need, and (6) commitment to change--relevant publics' commitment to eliminating discrepancies between the present and future situation. The decision-making body assigns weights to the criteria. Judgments using individual criteria are made on a 0-10 scale. Twenty-one research questions were formulated covering the five dimensions of model validity. It was concluded that the model must be refined but that it holds promise as a tool for prioritizing needs. (The supplementary materials contain information on the criteria and rating scales.) (CSS)

DEVELOPMENT AND VALIDATION OF A NORMATIVE PROCESS MODEL FOR DETERMINING PRIORITY OF NEED IN COMMUNITY ADULT EDUCATION

BY

Thomas J. Sork, Ph.D.
Department of Adult and Continuing Education
University of Nebraska - Lincoln

A paper presented at the Adult Education Research Conference, April 4-6, 1979, Ann Arbor, Michigan

DEVELOPMENT AND VALIDATION OF A NORMATIVE PROCESS MODEL FOR DETERMINING PRIORITY OF NEED IN COMMUNITY ADULT EDUCATION

By Thomas J. Sork*

Introduction

Determining priorities involves deciding which entity, from a defined set of competing entities, will be attended to first, which attended to second, third, fourth, et cetera, until all entities are placed in an ordered sequence. This ordered sequence can then be used to preferentially allocate available resources. In the face of finite resources and proliferating human needs, the necessity of establishing priorities has become axiomatic. Yet little attention has been given in the literature to this special instance of decision making.

Purpose

The overall purpose of this research effort was to develop and gather evidence of validity for a normative process model which can be used by community adult education councils to establish priority among community-level needs. The following objectives were considered instrumental to the attainment of this purpose:

1. To determine, by reviewing available literature, the state of the art of setting priorities;
2. To formulate a conceptual framework which would serve as a foundation on which the model could be developed;
3. To develop a testable "working prototype" of the model based on explicit design specifications; and
4. To test the "working prototype" in a representative environment for purposes of gathering evidence regarding the model's validity (how well it did what it was designed to do).

Review of Literature

Space limitations herein prohibit providing a complete review of the literature related to determining priorities. A complete review of this research can be found in Sork (1978). This section will provide the reader only an overview of the literature and several generalizations drawn from it by the author.

Educational literature generally had not, until the early 1970's, drawn attention to the complex process of setting priorities. If this literature is reflective of contemporary concerns related to the process of education, then not many educators have been concerned with how or why priorities are established. Those involved in the quest to systemitize educational planning seem to have overlooked this process. Since 1970, however, the list of publications which at least contain some reference to this process has increased substantially. Most of these publications remain of a very fugitive nature.

*Department of Adult and Continuing Education, University of Nebraska, 61 Henzlik Hall, Lincoln, Nebraska 68588

Knowles (1970), Houle (1972) and Harrington (1969) each address the need to determine priorities (not always using those concepts) in the context of planning adult education programs. But their contribution is in the form of suggested bases for making priority decisions rather than recommended procedures to follow in making such decisions.

Sweigert (1969), Hoepfner et. al. (1972), Westinghouse Learning Corporation (1973), Hershkowitz and Shami (1974), Opinion Research Corporation (1972) and Stake (1972) have developed systems for determining priority of needs in public school settings. Generally, these systems include a prescribed set of criteria and require some rather gross judgments of importance of meeting needs and adequacy of attainment. Judgments using individual criteria are aggregated into a final priority value using a wide variety of rules, the bases for which are not fully explained.

Sudijarto and Sutjipto (1974) report on a conceptually complex and rigid system developed for use at the national level in Indochina. The bases for their rules and procedures are made explicit but the system does not appear amenable to changes prompted by different planning contexts.

Yetley (1975) developed a system for use by community developers. Like most of the systems designed for use in schools, his combines judgments of importance of meeting a need with current level of fulfillment to yield a "utility" score.

Kirschner Associates (1975) and Bowers and Associates (1976) each suggest using several bases for making priority decisions but do not provide a clear rationale for their selection. The former suggests ranking all needs under each criterion then summing the ranks to determine priority. The latter suggests rating all needs from 1-5 under each criterion, then summing the ratings to determine priority.

Several generalizations can be made as a result of reviewing this literature. They are: (1) It appears that only since 1970 has any serious attention been given to the process of establishing priorities among educational needs, goals, or objectives. (2) The most frequently suggested bases for priority decisions are importance and current level of attainment. (3) In those models which require combining two or more judgements to yield a final priority decision, there is no consistant technique suggested for making such combinations. (4) Few of the authors provide an explicit conceptual or theoretical foundation for their suggested approach. (5) Few of the approaches allow the decision-making group to choose among bases for decisions or to differentially weight these bases. (6) Most authors seem to acknowledge the need to establish priorities in a systematic, purposeful way. (7) With few exceptions, the statements to be placed in priority order were not well defined. (8) All of the approaches reviewed implicitly encourage the user to consider more than one factor when making priority decisions. (9) Most of the suggested bases for decisions can be placed in one of two general classifications - - those related to importance and those related to feasibility.

Analysis of the criteria proposed in the literature resulted in the development of eight criteria groups: five related to importance of meeting a need and three related to feasibility of meeting a need.

Criteria Related to Importance

Goal relatedness refers to the degree to which the needs relate or contribute to the established goals of the decision-making group. Urgency or immediacy refers to the degree to which the needs call for immediate action. Magnitude of discrepancy refers to the size of the gap between the current state of affairs and more valued future state of affairs. Number affected refers to the actual number of people on which the need impacts. Sequence refers to the degree to which there is a particular instrumental order in which needs should be addressed.

Criteria Related to Feasibility

Acceptability refers to the degree to which relevant publics will accept the change from a present state of affairs to a more valued future state of affairs.

Resources required refers to the amount of resources which must be devoted to each need if all needs are to be met. Probability of change refers to the degree to which the discrepancy between the present state of affairs and valued future state of affairs can be reduced giving existing levels of resources.

Methodology

The design of this study was based on a five-stage problem-solving strategy known as the "systems-model approach" (Banathy, 1973). Stage one, exploration, includes the tasks of identifying the problem to be solved, establishing a base of information/knowledge which can be used to propose alternative solutions, determining the importance and feasibility of solving the problem and presenting an initial specification of expected outcomes. The tasks of this stage were accomplished by (1) reviewing available literature which addressed the problem of determining priorities, (2) building a conceptual framework detailing the relationships between and among program planning, community, need, and priority, and (3) specifying, in a tentative way, what the solution should do.

Stage two, model building, includes the tasks of building models of possible solutions to the problem and exploring alternative means of developing solutions. Both of these tasks are iterative and result in "a comprehensive description or display of the product or solution and a plan by which to acquire the product or solution" (p. 79). In this research, stage two tasks resulted in the development of several alternative general approaches to determining priorities. Each alternative was evaluated using the specifications generated in stage one and a decision made about which alternative seemed most promising.

Stage three, design and development, involves elaborating on the conceptual model until enough detail is specified to allow production of a first working prototype. The working prototype in this case was the complete, detailed process model ready for validation.

Stage four, validation, involves testing the product or solution against specifications. Again, the tasks associated with validation are iterative and result in the eventual development of a product or solution which is ready to install in the system for which it was designed. This stage was partially completed. A pre-test of the prototype was conducted with an active community education council in Durham, North Carolina during July, 1977. Following some revisions in the prototype, it was tested with a second community education council in

Fort Collins, Colorado during November, 1977. In both cases the prototype was presented in workshop form using hypothetical needs assessment data as input into the decision-making process. The second test, results of which will be reported below, involved seven hours of participant interaction with the procedure including time spent receiving evaluative feedback, both written and oral.

Research questions were generated using a matrix consisting of five dimensions of model validity (whether model was complete, adaptable, understandable, systematic, and acceptable) and three potential sources of evidence (analysis of output from the test, opinions of those involved in the test, and analysis of model design).

Stage five, implementation, involves installing the product or solution and assessing the degree to which it satisfies the need or solves the problem for which it was designed. It was not intended that stage five be completed in this study. Additional work must be done before the model can meet all criteria of validity.

Results

Results of this research project are of two types. First, there is the prototype process model, development of which formed a large part of this project. Second, there are results of the validation stage.

Description of the Model

The model is designed to assist community adult education councils in the task of determining priorities among community-level needs. Needs are defined as measureable discrepancies between current states of affairs and more valued future states of affairs. It is assumed that needs have been identified and that each need can be related to a goal dimension of the "good community" (i.e., safety, economic efficiency, health, home and family life, etc.).

Six criteria are proposed; four which can be classified as importance criteria and two which can be classified as feasibility criteria.

Contribution to goals, the first criterion of importance, is used to establish priority based on two factors: (1) how important the goal is to which the need relates and (2) how great a contribution the need makes to the definition of the goal. The two factors are combined to yield a final priority rating. Those needs which both relate to a goal of high importance and make a relatively large contribution to the definition of the goal are given high priority.

Magnitude of discrepancy is used to establish priority based on the relative size of the measurable discrepancy between the present state of affairs and valued future state of affairs. It is based on the assumption that needs involving a relatively large change (%) from present states of affairs to future states of affairs should be given higher priority than needs involving a relatively small change.

Immediacy is used to establish priority based on the degree to which each need requires immediate attention. It is based on the assumption that needs which will increase in intensity (the discrepancy will increase) if no action is taken should be given higher priority than needs which will decrease, or remain equal, in intensity if no action is taken. Immediacy is determined by analyzing time-series data for any trends which might indicate that the need is becoming more or less severe over time.

Instrumental value, the fourth criterion of importance, is used to establish priority based on the degree to which meeting one need will have a positive or negative effect on meeting other needs. It is based on the assumption that needs which, when met, will increase the likelihood that other needs will be met should be considered more important than needs which will decrease the likelihood that other needs will be met.

Availability of resources, the first criterion of feasibility, is used to establish priority based on the degree to which the resources necessary to meet the need are currently available. Needs for which all resources are available (or for which none are required) are given higher priority than needs for which required resources are not available.

Commitment to change is used to establish priority based on the degree to which "relevant publics" are committed to eliminating the discrepancy between the present state of affairs and valued future state of affairs. It is based on the assumption that needs involving change to which "relevant publics" have a positive commitment should be given higher priority than needs involving change to which "relevant publics" have no commitment.

Before the criteria can be used, the decision-making body must assign weights (multipliers) indicating the relative contribution each criterion should make to the final priority decision. A criterion assigned a multiplier of two would be considered twice as important to the final decision as a criterion assigned a multiple of one.

Judgments using individual criteria are made on a 0-10 scale, with 0 representing lowest priority and 10 representing highest priority. To determine a total priority value for each need, individual ratings are first multiplied by the criterion weights, then added together. An additive aggregation rule is used to make addition or deletion of criteria a simple process. The operational definition of each criterion was developed so that a higher priority rating is always "better" making an additive aggregation rule possible. A rating rather than a ranking system was used because the latter provides only ordinal-level measurement while the former provides a better idea of the magnitude of differences in priority between needs.

Results of Validation

Twenty-one research questions were formulated covering the five dimensions of model validity presented above.

Both quantitative and qualitative evidence was collected. In those cases where quantitative evidence was involved (e.g. frequency of responses on a Likert Scale, percentage of correct answers using magnitude of discrepancy criterion), criterion levels were established. For example, responses on the Likert Scale items were judged to be significant if 80% or more of the respondents indicated they "strongly agreed" or "agreed" with a statement (or "strongly disagreed" or "disagreed" if the statement was negative. Each research question was accepted or rejected based on the available evidence.

Following are the questions and the answers to each question organized by dimension of validity. (See Sork (1978) for a complete discussion of the methods used to collect and analyze evidence of model validity).

How complete is the model? (1) Does the model contain all elements which appear from the literature to be essential to producing a list of needs in priority order? Yes. (2) Did participants in the test produce the desired output by use of the model? Yes. (3) Did participants in the test judge each of the criteria included in the model as useful? Yes. (4) Did participants in the test identify criteria not included in the model which they felt should be used to establish priorities among community-level needs? Yes.

How adaptable is the model? (5) Does the model design allow for variation in the types of information inputs? Yes. (6) Does the model design allow for variation in value orientations of user groups? Yes. (7) Did the output of model testing indicate that the model was adapted? Yes. (8) Did participants in the test perceive that the information required to apply the criteria could be easily obtained in the test community? No. (9) Did participants in the test perceive that the information required to apply the criteria could be easily obtained in most communities? No. (10) Did participants in the test perceive the model as being adaptable for use in their community? Yes. (11) Did participants in the test perceive the model as being adaptable for use in most communities? No. (12) Did participants in the test perceive the model as being adaptable for use in agencies and organizations? No. How understandable is the model? (13) Did the output of the mdel test reflect an understanding of the model? No. (14) Did participants in the test perceive that they understood the model? Yes. How systematic is the model? (15) Does the model design prescribe a series of rationally - sequenced steps which result in the processing of specified input into desired output? Yes. (16) Did the output of model testing make it possible to identify each component of the decision-making process? Yes. (17) Did participants in the test perceive the model as an aid to communication of bases for priority decisions? No.
How acceptable is the model? (18) Did participants in the test perceive the model as not too complex for use in the test community? Yes. (19) Did participants in the test perceive the model as not too complex for use in most communities? No. (20) Did participants in the test perceive the time required to use the model as less than or equal to the amount of time they have to spend on making priority decisions? No. (21) When offered a choice between a group-generated strategy for determining priority and the model, would participants in the test choose to use the model? Yes.

Answers to questions 1, 2, 3, 5, 6, 7, 10, 14, 15, 16, 18, and 21 support the validity of the model while answers to the others suggest that the model did not do what it was designed to do.

Conclusions and Implications

Based on the evidence collected, it is clear that the model must undergo substantial refinement before it meets each criterion of validity. At the same time, the evidence suggests that the model holds promise as a useful addition to the tool chest of those involved in community adult education. Efforts at refinement should focus on (1) adding criteria to the model, (2) including an explicit step which allows the user group to choose those criteria it wishes to use, (3) simplifying,or offering alternatives to, the mathematical manipulations required to use the model, (4) improving the clarity of descriptive information and worksheets so that the essential elements of the model can be communicated in a parsimonious fashion, (5) reducing the amount of time required to apply the model.

References

Banathy, B.H. Developing a Systems View of Education. Belmont, CA: Lear Siegler - Fearon, 1973.

Bowers and Associates. A Guide to Needs Assessment in Community Education. Washington, D.C.: U. S. Government Printing Office, 1976.

Harrington, A. H. Economics of program management. In V. R. Griffin (ed.), Program Planning in Adult Education. Toronto: Ontario Institute for Studies in Education, 1969.

Herschkowitz, M., & Shami, M. A. A. Needs Assessment and goals validation for Maryland Public Education. In M. Herschkowitz (ed.) Statewide Educational Needs Assessment: Results from Selected Model States. Silver Spring, Maryland: Herschkowitz Associates, 1974.

Hoepfner, R., Bradley, P. A., Klein, S. P., & Atkin, M.C. A Guidebook for CSE/Elementary School Evaluation Kit: Needs Assessment. Boston: Allyn and Bacon, 1972.

Houle, C. O. The Design of Education. San Francisco: Jossey-Bass, 1972.

Kirschner Associates. Toward More Effective Management: The Role of Objective Setting and Monitoring (Training materials). Washington, D.C.: U. S. Government Printing Office, 1976.

Knowles, M. S. The Modern Practice of Adult Education. New York: Association Press, 1970.

Opinion Research Corporation. Highlights of a Survey on Educational Goals Conducted for New Jersey Department of Education. Trenton: New Jersey Department of Education, 1972.

Sork, T. J. A Normative process model for determining priority of need in Community Adult Education (Doctoral dissertation, The Florida State University, 1978). Dissertation Abstracts International, 1978, 39, 1269A. (University Microfilms No. 7815484).

Stake, R. E. Priorities Planning: Judging the Importance of Individual Objectives. Los Angeles: Instructional Objectives Exchange, 1972.

Sudijarto & Sutjipto. Setting priorities Among Educational Objectives. Saigon: SEAMEO Regional Center for Educational Innovation and Technology, 1974.

Sweigert, R. L. The First Step in Educational Problem Solving: A Systematic Assessment of Student Benefit. Sacramento, Calif.: State Department of Education, 1969. (ERIC Document Reproduction Service No. ED 038 740)

Westinghouse Learning Corporation. Administrative Manual: Educational Needs Assessment. Iowa City, Iowa: Author, 1973.

Yetley, M. J. Prioritizing Needs Through Surveys of Community Households and Community Leaders. Knoxville: The University of Tennessee, 1975.

Supplementary Materials

DEVELOPMENT AND VALIDATION OF A NORMATIVE PROCESS MODEL FOR DETERMINING PRIORITY OF NEED IN COMMUNITY ADULT EDUCATION

by
Thomas J. Sork*

Presented at the Adult Education Research Conference
April 5, 1979--Ann Arbor, Michigan

*Department of Adult and Continuing Education, 61 Henzlik Hall,
University of Nebraska, Lincoln, Nebraska 68588

Contribution to Goals

This criterion is used to establish priority based on two factors: (1) how important the goal is to which the need relates and (2) how great a contribution the need makes to the definition of the goal. These two factors are combined to yield a final priority rating. Those needs which both relate to a goal of high importance and make a relatively large contribution to the definition of the goal are given high priority.

Magnitude of Discrepancy

This criterion is used to establish priority based on the relative size of the "gap" (measurable discrepancy) between the present state of affairs and future state of affairs. It is based on the assumption that needs involving a relatively large percent change from PSA to FSA should be given higher priority than needs involving a relatively small percent change.

Immediacy

This criterion is used to establish priority based on the degree to which each need requires immediate attention. It is based on the assumption that needs which will increase in intensity if no action is taken should be given higher priority than needs which will decrease, or remain equal, in intensity if no action is taken. Immediacy is determined by analyzing time-series data for any trends which might indicate that the need is becoming more or less severe over time.

Instrumental Value

This criterion is used to establish priority based on the degree to which meeting one need will have a positive or negative effect on meeting other needs. It is based on the assumtion that needs which, when met, will increase the likelihood that other needs will be met should be considered more important than needs which will decrease the likelihood that other needs will be met. Each need is compared to all other needs to determine the degree to which meeting it will increase or decrease the likelihood that the other needs will be met.

Availability of Resources

This criterion is used to establish priority based on the degree to which the resources necessary to meet the need are currently available. Use of this criterion involves collecting "expert" opinion of the availability of human, financial, physical, hardware, and software resources. Needs for which all resources are available (or for which none are required) are given higher priority than needs for which needed resources are not available.

Commitment to Change

This criterion is used to establish priority based on the degree to which "relevant publics" are committed to eliminating the discrepancy between the present state of affairs (PSA) and valued future state of affairs (FSA). It is based on the assumption that needs involving change to which "relevant publics" have a positive commitment should be given higher priority than needs involving change to which "relevant publics" have no commitment. Using this criterion involves identifying "relevant publics," deciding the relative importance of each public's commitment and assessing the commitment to change of each group.

CONTRIBUTION TO GOALS

This criterion can be used to help you determine the priority of needs based on the degree to which each need relates and contributes to the established goals of your group. The assumption underlying this criterion is that needs which (1) relate to goals judged of high importance by the group and (2) make a relatively large contribution to the definition of the goal should be given higher priority than needs which relate to goals of lesser importance and make a smaller contribution to the definition of the goal.

In order to use this criterion you will need the following information:

(a) A list of goals and the "Goal Importance Rating" (the number between 0-5) you previously assigned to each goal, and

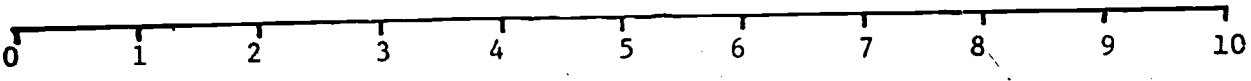
(b) A list of needs (measurable discrepancies).

The process of using this criterion will involve (1) assigning to each need the "Goal Importance Rating" of the goal to which it relates and (2) deciding, as a group, the percent contribution that each need makes to the definition of its goal. A helpful way to think about this process is to imagine what impact removing the need would have on the definition of the goal. If the goal would retain its essential meaning, then the need would necessarily make a low percent contribution. If the essential meaning of the goal is lost when the need is removed, the need would necessarily make a high percent contribution.

Once these percents are determined for each need, they will be converted into a "Contribution to Goal Rating" using the formula below.

$$\text{Contribution to Goal Rating} = \frac{\text{Percent Contribution to Goal}}{20}$$

The "Contribution to Goal Rating" will be a number between 0-5. This number will then be added to the "Goal Importance Rating" to yield a final priority rating. This rating can be interpreted using the scale below.



Needs with this rating make 0% contribution to goals judged not important.

Needs with this rating make a 100% contribution to goals judged of high importance.

FC

CONTRIBUTION TO GOALS WORKSHEET

Goal	Goal Importance Rating (0-5)	Need	Percent Contribution to Goal	Contribution to Goal Rating (0-5)	Priority Rating (0-10)
Home and Family Life	_____	HF-1	_____	_____	_____
		HF-2	_____	_____	_____
		HF-3	_____	_____	_____
Leisure	_____	L-1	_____	_____	_____
		L-2	_____	_____	_____
		L-3	_____	_____	_____
Civic Responsibility	_____	CR-1	_____	_____	_____
		CR-2	_____	_____	_____
		CR-3	_____	_____	_____
Economic Efficiency	_____	EE-1	_____	_____	_____
		EE-2	_____	_____	_____
		EE-3	_____	_____	_____
Safety	_____	S-1	_____	_____	_____
		S-2	_____	_____	_____
		S-3	_____	_____	_____
Health	_____	H-1	_____	_____	_____
		H-2	_____	_____	_____
		H-3	_____	_____	_____

$$\text{Contribution to Goal Rating} = \frac{\text{Percent Contribution to Goal}}{20}$$

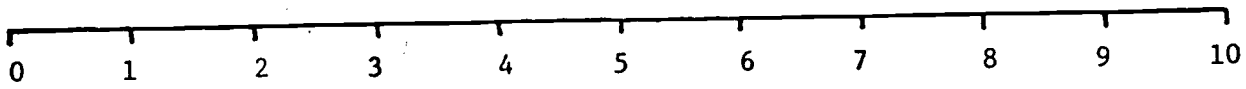
$$\text{Priority Rating} = \text{Goal Importance Rating} + \text{Contribution to Goal Rating}$$

MAGNITUDE OF DISCREPANCY

This criterion can be used to help you determine the priority of needs based on the relative size of the gap between the present state of affairs (PSA) and valued future state of affairs (FSA). The assumption underlying this criterion is that needs which involve a "large" discrepancy should be given higher priority than needs which involve a "small" discrepancy.

In order to use this criterion you will need only a list of the needs (measurable discrepancies).

The process of using this criterion will involve calculating the percent change between the present state of affairs (PSA) and the valued future state of affairs (FSA) for each need. Once this percentage is determined, it will be used to assign a rating from 0-10 to each need using the scale below.



No percent change

Highest percent change

Two formulas will be useful in this task:

$$\text{Percent change} = \frac{\text{Difference between PSA and FSA}}{\text{PSA}} \times 100$$

and

$$\text{Priority Rating} = \frac{\text{Percent change for each need}}{\text{Highest percent change}} \times 10$$

The resulting priority rating will be a number between 0-10 which reflects the relative magnitude of each need.

MAGNITUDE OF DISCREPANCY WORKSHEET

Need	|PSA - FSA| = Diff.	÷ PSA	X 100 = Percent Change	÷ Highest Percent Change	X 10 = Priority Rating (0-10)
HF-1	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
HF-2	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
HF-3	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
L-1	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
L-2	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
L-3	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
CR-1	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
CR-2	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
CR-3	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
EE-1	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
EE-2	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
EE-3	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
S-1	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
S-2	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
S-3	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
H-1	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
H-2	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____
H-3	_____ - _____ = _____	÷ _____	X 100 = _____	÷ _____	X 10 = _____

$$\text{Percent Change} = \frac{\text{Difference between PSA and FSA}}{\text{PSA}} \times 100$$

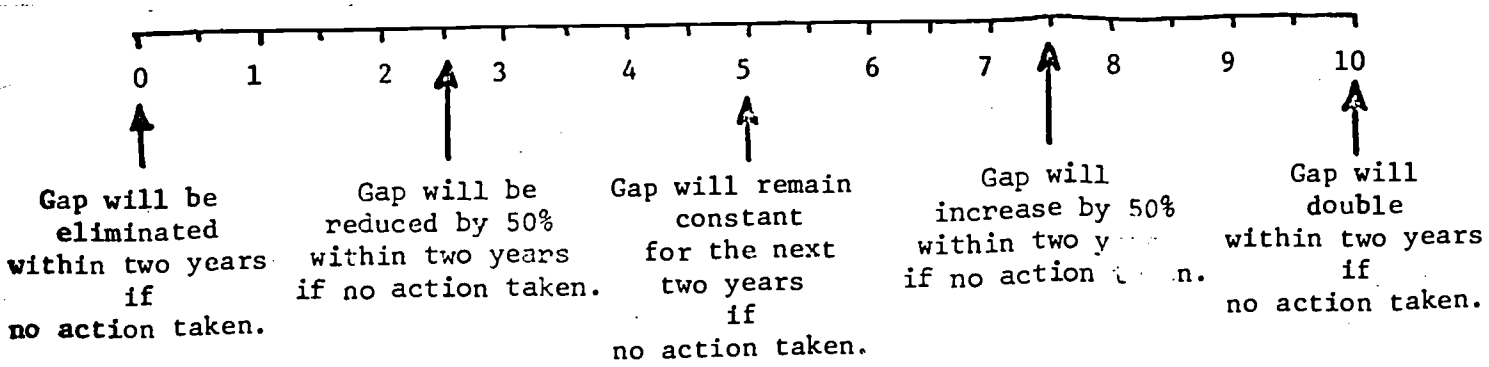
$$\text{Priority Rating} = \frac{\text{Percent change for each need}}{\text{Highest percent change}} \times 10$$

IMMEDIACY

This criterion can be used to help you determine the priority of needs based on the degree to which each need requires immediate attention. It is based on the assumption that needs which will increase in intensity if no action is taken should be given higher priority than needs which will decrease, or remain equal, in intensity if no action is taken.

In order to use this criterion you will need to gather time-series data (trend information) which will allow you to judge whether the need will increase, remain equal, or decrease in intensity if no steps are taken to meet it. It should be assumed that if a trend is evident, it will continue into the immediate future (defined for our purposes as within the next two years).

The process of using this criterion will involve your studying the time-series data and assigning a priority rating to each need using the scale below.



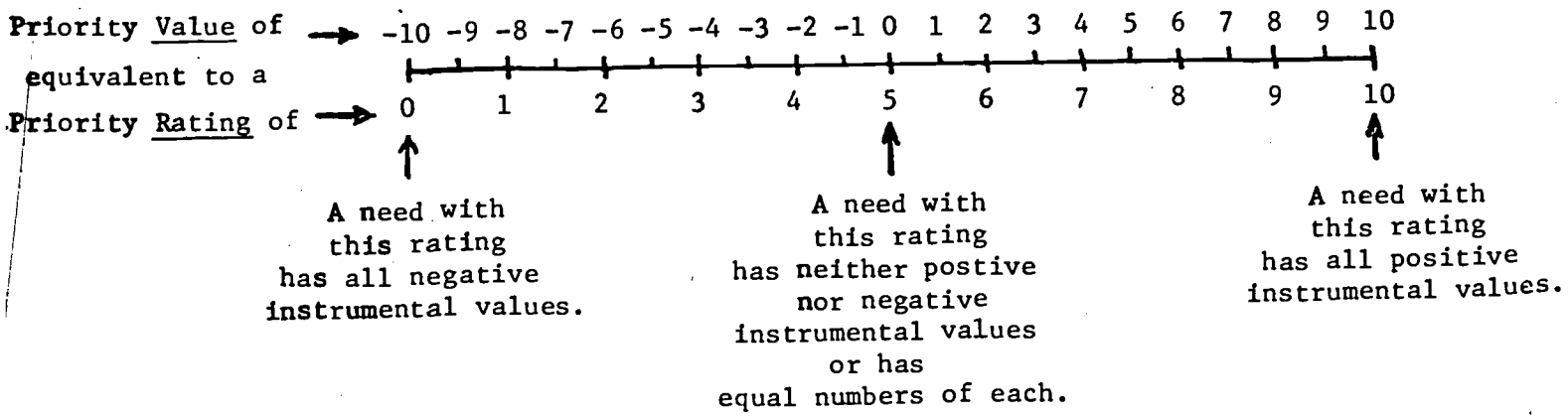
This criterion can be used to help you determine the priority of needs based on the degree to which meeting one need will have a positive or negative effect on meeting other needs. It is based on the assumption that needs which, when met, will increase the likelihood that other needs will be met should be considered more important than needs which will decrease the likelihood that other needs will be met.

In order to use this criterion you will need only a list of needs (measurable discrepancies).

The process of using this criterion will involve comparing each need with all other needs to determine the degree to which meeting it would increase or decrease the likelihood of the other needs being met. If meeting one need will make it more likely that another need will be met, the first will be assigned an instrumental value of +1. If meeting one need will have no effect on meeting another need, the first need will be assigned an instrumental value of 0. If meeting one need will make it less likely that another need will be met, the first need will be assigned an instrumental value of -1. All instrumental values for each need will then be summed and the formula and scale below used to determine priority rating.

$$\text{Priority value} = \frac{\text{Sum of instrumental values for each need}}{\text{Number of needs} - 1} \times 10$$

This priority value will be a number between -10 and +10. In order to convert this value to a 0-10 scale, use the conversion scale below.



FC

INSTRUMENTAL VALUE WORKSHEET

Meeting this need...

will affect this need...

	HF-1	HF-2	HF-3	L-1	L-2	L-3	CR-1	CR-2	CR-3	EE-1	EE-2	EE-3	S-1	S-2	S-3	H-1	H-2	H-3	Sum of Instrumental Values	Priority Value (-10-+10)	Priority Rating (0-10)
HF-1	X																				
HF-2		X																			
HF-3			X																		
L-1				X																	
L-2					X																
L-3						X															
CR-1							X														
CR-2								X													
CR-3									X												
EE-1										X											
EE-2											X										
EE-3												X									
S-1													X								
S-2														X							
S-3															X						
H-1																X					
H-2																	X				
H-3																		X			

Priority value = $\frac{\text{Sum of instrumental values for each need}}{\text{Number of Needs - 1}} \times 10$

FC

IMPORTANCE RATING SUMMARY SHEET

Criteria

Need	Rating X Wt.= Weighted Rating	Rating X Wt.= Weighted Rating	Rating X Wt.= Weighted Rating	Rating X Wt.= Weighted Rating	Total Importance Rating
HF-1	X =	X =	X =	X =	
HF-2	X =	X =	X =	X =	
HF-3	X =	X =	X =	X =	
L-1	X =	X =	X =	X =	
L-2	X =	X =	X =	X =	
L-3	X =	X =	X =	X =	
CR-1	X =	X =	X =	X =	
CR-2	X =	X =	X =	X =	
CR-3	X =	X =	X =	X =	
EE-1	X =	X =	X =	X =	
EE-2	X =	X =	X =	X =	
EE-3	X =	X =	X =	X =	
S-1	X =	X =	X =	X =	
S-2	X =	X =	X =	X =	
S-3	X =	X =	X =	X =	
H-1	X =	X =	X =	X =	
H-2	X =	X =	X =	X =	
	X =	X =	X =	X =	

AVAILABILITY OF RESOURCES

This criterion can be used to help you distinguish between needs on the basis of the degree to which resources required to meet each need are currently available. The assumption underlying this criterion is that needs for which resources are readily available should be given higher priority than needs for which resources are less readily available. Several general classes of resources can be identified which may be required if needs are to be met. They are:

1. Human resources--people with the knowledge and skills necessary to bring about the desired change.

2. Financial resources--the money that will be required.

3. Physical resources--the facilities that will be required.

4. Hardware resources--the equipment that will be required.

5. Software resources--the materials and supplies that will be required.

At this point in the program development process (before objectives are formulated and specific responses to needs proposed) it is difficult to get precise information regarding what resources are required to satisfy a particular need. Without such information, it would be difficult for the group to determine the degree to which resources are available to satisfy each need. Therefore, it is proposed that the best sources of information regarding availability of resources are individuals with expertise in the area of each need. Such individuals should be able to estimate the degree to which resources are available to meet each need.

These estimates can be obtained in the following manner: Experts in each need area are identified and given a complete description of each measurable discrepancy. They are then asked to estimate the availability of each discrete category of resources (i.e., human, financial, physical, hardware, software) using the following scale:

0 = Resources clearly not available
1 = Resources may be available
2 = Resources clearly are available or are not required

After the experts make their judgments, the values for each need are added together to yield a priority rating between 0 and 10. A rating of 10 indicates that each category of resource is clearly available (or not required) while a rating of 0 indicates that none of the required resources are available.

0 = Resources Clearly Not Available
1 = Resources May Be Available
2 = Resources Clearly Are Available or Are Not Required

.FC

AVAILABILITY OF RESOURCES WORKSHEET

Need	Human Resources		Financial Resources		Physical Resources		Hardware Resources		Software Resources		Priority Rating (0-10)
HF-1	____	+	____	+	____	+	____	+	____	=	____
HF-2	____	+	____	+	____	+	____	+	____	=	____
HF-3	____	+	____	+	____	+	____	+	____	=	____
L-1	____	+	____	+	____	+	____	+	____	=	____
L-2	____	+	____	+	____	+	____	+	____	=	____
L-3	____	+	____	+	____	+	____	+	____	=	____
CR-1	____	+	____	+	____	+	____	+	____	=	____
CR-2	____	+	____	+	____	+	____	+	____	=	____
CR-3	____	+	____	+	____	+	____	+	____	=	____
EE-1	____	+	____	+	____	+	____	+	____	=	____
EE-2	____	+	____	+	____	+	____	+	____	=	____
EE-3	____	+	____	+	____	+	____	+	____	=	____
S-1	____	+	____	+	____	+	____	+	____	=	____
S-2	____	+	____	+	____	+	____	+	____	=	____
S-3	____	+	____	+	____	+	____	+	____	=	____
H-1	____	+	____	+	____	+	____	+	____	=	____
H-2	____	+	____	+	____	+	____	+	____	=	____
H-3	____	+	____	+	____	+	____	+	____	=	____

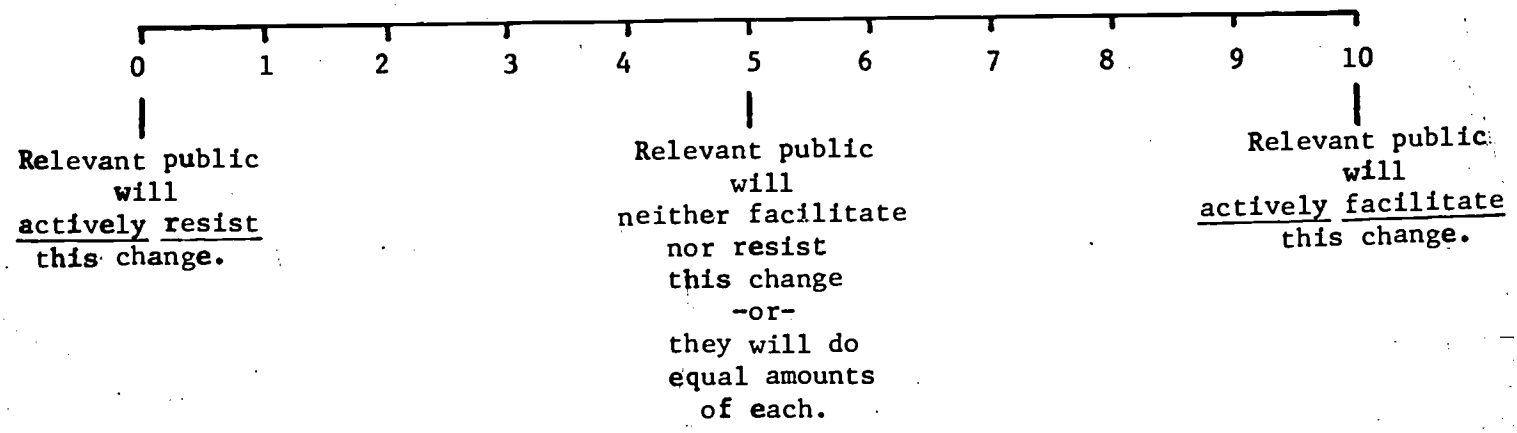
COMMITMENT TO CHANGE

This criterion can be used to help you determine the degree to which "relevant publics" are committed to eliminating the discrepancy between the present state of affairs (PSA) and valued future state of affairs (FSA). It is based on the assumption that needs involving change to which "relevant publics" have a positive commitment should be given higher priority than needs involving change to which "relevant publics" have no commitment or a negative commitment. As used here, commitment should be thought of as having both positive and negative dimensions. A positive commitment to change reflects the degree to which "relevant publics" will facilitate the process of meeting a need. A negative commitment to change reflects the degree to which "relevant publics" will resist the process of meeting a need. At the center of this continuum is a point where "relevant publics" will neither facilitate nor resist change.

Relevant publics can include (1) community residents, (2) elected public officials, (3) non-elected community leaders, (4) other individuals whose commitment to change is considered important to your group, or (5) combinations of the above.

In order to use this criterion you will need to (1) identify who you consider your relevant publics to be, (2) decide the relative importance you wish to attach to the commitment of each relevant public (This decision should be based on the degree to which the commitment of a particular relevant public will affect your ability to meet a need), and (3) collect from each relevant public information which will allow you to rate their commitment in relation to each need.

The assignment of ratings should be made and priority ratings interpreted using the scale below:



If more than one relevant public is involved, the formula below should be used to determine the priority rating for each need.

$$\text{Priority rating} = \frac{\text{Sum of ratings for each need}}{\text{Sum of weights}}$$

FC

COMMITMENT TO CHANGE WORKSHEET

Needs	Commitment by Relevant Publics				Sum of Ratings		Sum of Weights		Priority Rating (0-10)
	_____ _____ Weight=X____		_____ Weight=X____		_____ Weight=X____				
HF-1	____	+	____	+	____	=	____	÷ ____ =	____
HF-2	____	+	____	+	____	=	____	÷ ____ =	____
HF-3	____	+	____	+	____	=	____	÷ ____ =	____
L-1	____	+	____	+	____	=	____	÷ ____ =	____
L-2	____	+	____	+	____	=	____	÷ ____ =	____
L-3	____	+	____	+	____	=	____	÷ ____ =	____
CR-1	____	+	____	+	____	=	____	÷ ____ =	____
CR-2	____	+	____	+	____	=	____	÷ ____ =	____
CR-3	____	+	____	+	____	=	____	÷ ____ =	____
EE-1	____	+	____	+	____	=	____	÷ ____ =	____
EE-2	____	+	____	+	____	=	____	÷ ____ =	____
EE-3	____	+	____	+	____	=	____	÷ ____ =	____
S-1	____	+	____	+	____	=	____	÷ ____ =	____
S-2	____	+	____	+	____	=	____	÷ ____ =	____
S-3	____	+	____	+	____	=	____	÷ ____ =	____
H-1	____	+	____	+	____	=	____	÷ ____ =	____
H-2	____	+	____	+	____	=	____	÷ ____ =	____
H-3	____	+	____	+	____	=	____	÷ ____ =	____

FC

FEASIBILITY RATING SUMMARY SHEET

Criteria

Need	Rating X Wt.= Weighted Rating	Rating X Wt.= Weighted Rating	Rating X Wt.= Weighted Rating	Rating X Wt.= Weighted Rating	Total Feasibility Rating
HF-1	X =	X =	X =	X =	
HF-2	X =	X =	X =	X =	
HF-3	X =	X =	X =	X =	
L-1	X =	X =	X =	X =	
L-2	X =	X =	X =	X =	
L-3	X =	X =	X =	X =	
CR-1	X =	X =	X =	X =	
CR-2	X =	X =	X =	X =	
CR-3	X =	X =	X =	X =	
EE-1	X =	X =	X =	X =	
EE-2	X =	X =	X =	X =	
EE-3	X =	X =	X =	X =	
S-1	X =	X =	X =	X =	
S-2	X =	X =	X =	X =	
S-3	X =	X =	X =	X =	
H-1	X =	X =	X =	X =	
" 2	X =	X =	X =	X =	14
H-3	X =	X =	X =	X =	29