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Targeting Outcomes of Programs: A Hierarchy for Targeting Outcomes and Evaluating Their Achievement

Kay Rockwell
University of Nebraska - Lincoln, krockwell1@unl.edu

Claude Bennett
Cooperative State Research, Education and Extension Service, USDA

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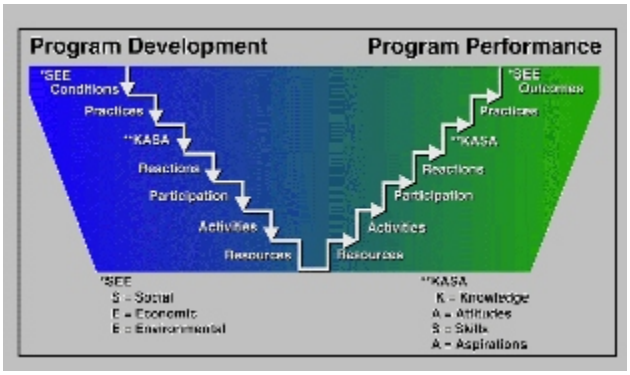
A Hierarchy for Targeting Outcomes and Evaluating Their Achievement

Synopsis

Targeting Outcomes of Programs (TOP) focuses on outcomes in planning, implementing, and evaluating programs. TOP is based on a hierarchy that integrates program evaluation within the program development process. TOP uses this simple framework to target specific outcomes in program development and then to assess the degree to which the outcome targets are reached.



Intended Audience: People who develop and administer information, education, and training programs on high priority problems or issues in today's society.

TOP is based on a theoretically sound framework that has been tested, revised and refined, and widely used over the past 20 years (Bennett, 1975 ; Bennett, 1979 ; and Bennett & Rockwell, 1995).

Kay Rockwell, Ph.D.
University of Nebraska-Lincoln

Claude Bennett, Ph.D.
Cooperative State Research
Education and Extension Service, USDA

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Targeting Outcomes of Programs

Introduction

TOP's History

"Identifying program outcomes and documenting their achievement – it's complicated and hard to do," said one adult educator. Our impression is that most educators in nonformal instructional programs would agree. Our experience suggests that current program planning and evaluation models often fail to support users in achieving their main goal: to reduce social, economic, or environmental problems and document progress in doing so.

We have been testing TOP (Bennett & Rockwell, 1995) since 1994. It is an outgrowth of Bennett's hierarchy (Bennett, 1975 & Bennett, 1979). The hierarchy has been used principally by Cooperative Extension to evaluate its programming in the U.S. and by extensionists in numerous other countries. Over the years, we have collected many user comments about the applicability of both the hierarchy and TOP. When asked for feedback on TOP, educators comment that it is just common sense to target their programming toward social, economic, and environmental outcomes, and then assess the degree to which these outcomes are achieved.

After two decades of using Bennett's hierarchy and four years of testing TOP, we affirm TOP's nine steps for educators to use as they focus programming on a strategic need area.

Staff...

1. Assess specific needs, issues, and program opportunities relative to their agency's mission;
2. Prioritize social, economic, and environmental needs and estimate types and amounts of practices necessary to reduce them; and,
3. Form teams with appropriate program partners to achieve the desired results.

Teams...

4. Target social, economic, and environmental outcomes as well as intermediate and short term outcomes that support the long-term outcomes;

5. Design programs to achieve the selected outcome targets and assess the design;
6. Select indicators of program success and track the extent to which programs are implemented and outcome targets are achieved;
7. Plan an evaluation to identify the degree to which the program contributes to the desired outcomes; and
8. Implement the program, track the outcomes, and evaluate the program's contributions.

Agencies/organizations/institutions....

9. Use outcome tracking and program performance evaluation to improve subsequent programs, document accountability, and market programs.

These nine steps help educators answer the questions:

1. Why have a program?
2. How should the program be conducted?
3. Is the program design implemented?
4. What is the pay off from the program?

To summarize, TOP helps users to:

1. Assess needs within a broad need area;
2. Target outcomes for specific social, economic, and environmental conditions;
3. Assess program opportunities for an agency, organization, institution, or coalition;
4. Design programs to achieve the targeted outcomes;
5. Track the extent to which the targeted outcomes are achieved; and
6. Evaluate the program's contribution to the desired outcomes.

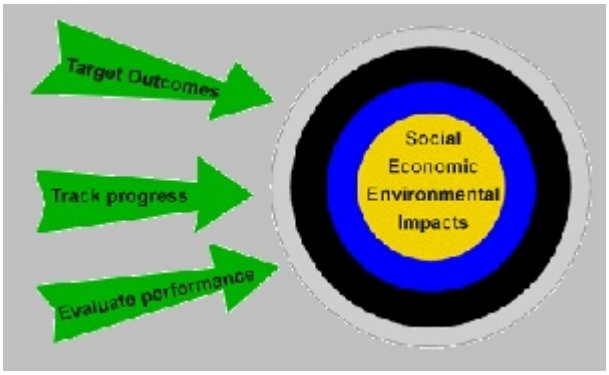
TOP Helps Target Outcomes, Track Progress, and Evaluate Performance

Postsecondary educational institutions, government agencies, and private organizations increasingly must provide information, nonformal education, and training programs that address high priority problems and issues. While public funds to support such educational programming continue to shrink, recent legislation requires public sector agencies to report outcomes associated with the programs they develop and implement (e.g., Congress of the United States, 1993; State of Oregon, 1994).

Managers of public agencies, private organizations, and coalitions must support educators and tolerate occasional failures as they focus on program outcomes. At the same time, managers must hold educators generally accountable for achieving the expected program outcomes and reporting on their achievement.

Targeting Outcomes of Programs (TOP) includes a practical hierarchy for (a) targeting outcomes,

(b) tracking progress toward achieving targets, and (c) evaluating the degree to which programs impact targeted social, economic, and environmental conditions.



The feasibility of TOP to target, track, and evaluate program outcomes is illustrated by the following quote from a TOP user:

Text version of user's video.

(TOP) relates program evaluation to program development by focusing on desired outcomes. It integrates program evaluation into the program planning process. TOP uses a simple framework to target specific program outcomes, track the extent to which they are achieved, and evaluate how well a program achieves these outcomes. It helps educators develop programs that can be evaluated.

TOP Helps Conceptualize Program Plans

Program planning includes decisions to initiate, maintain, modify, and discontinue programs. Program priorities are based on views of stakeholders such as legislators, policy makers, administrators, program leaders, advisory groups, program participants, and educational specialists; priorities also are influenced by objective data on current situations and emerging trends.

In planning a program for a strategically identified programming area, TOP helps to:

- assess specific community needs (including issues) as well as opportunities to develop a responsive educational program,
- target social, economic, environmental and other program outcomes, and
- evaluate educational program capacity, either alone or in concert with other programs, to resolve identified social, economic, and environmental needs.

TOP's usefulness for understanding program evaluation is illustrated by the following quote from a TOP user:

Text version of user's video.

TOP helped me understand how program evaluation relates to the outcomes that were identified when we planned a program to help college freshman students of color better integrate themselves into a University community. While our program focused within one University, TOP helped me conceptualize how program evaluation relates back to expected outcomes for national initiatives, regional or state-wide programs, or local activities. TOP has helped me comprehend the broad, general concepts about evaluating program outcomes as well a developing a specific evaluation plan for my local program.

Overview of the Seven Levels

TOP Includes a Two-Sided Hierarchy with Seven Levels

TOP assumes that program development and program evaluation reflect the same seven levels. In program development, you start at the top level on the left-hand side and work down. In assessing program performance, you start at the bottom level on the right-hand side and work up.

Introduction to the Hierarchy

Text version of Dr. Claude Bennett's video.

Kay Rockwell and I have been testing TOP since 1994. We designed TOP to show the linkages between program development and program performance. TOP is an outgrowth of my 1975 evaluation hierarchy. The hierarchy has been used widely to evaluate extension programs.

TOP assumes that most information, education, and training programs can be represented by the two-sided, seven-level hierarchy. Program development is depicted by descending the model on the left-hand side; program performance is depicted by ascending the model on the right-hand side.

First, let's focus on the program development process. One first identifies social, economic, and environmental conditions that need improving. Improving these social, economic, and environmental conditions, or SEE conditions, constitutes the highest aim of educational programs. So, SEE conditions are at the top of the "programming staircase."

In order to improve the identified SEE condition(s), individuals and groups must use practices that improve the conditions. Therefore, in program planning, you target the specific practice use that is necessary to achieve the targeted social, economic, and environmental condition(s).

You then focus on the KASA required to achieve the practice changes that have been targeted. Practices change as people increase their knowledge, modify their attitudes, improve their skills, and raise their aspirations, and then apply these KASAs changes in their own living and working situations.

Program participants change their KASAs through participating in program activities. So, one next targets the types of reactions needed to ensure sufficient participation in activities that promote the desired KASAs. Finally, resources that support the implementation of the program activities are identified and acquired.

Now, let's focus on the process of program performance. Designated resources are spent to conduct the targeted program activities and obtain the necessary participation. Participants' reactions affect the extent of their participation in the activities.

Positive reactions help program participants acquire the targeted KASAs, that is, knowledge, attitudes, skills, and aspirations. The greater their interest and involvement in the activities, the more likely participants are to acquire the targeted KASAs.

As participants apply new KASAs to their working and living behaviors, they adopt the targeted practices. As participants use these practices, they help change the SEE conditions which were targeted. These social, economic, and environmental outcomes affect both the program participants and the general public. SEE outcomes are placed highest in the "programming staircase" because they are end results expected from the educational programming.

Like other models, the hierarchy oversimplifies reality. Such simplification is necessary to provide user friendly constructs for viewing programming. The actual sequence of events in programming does not always proceed in accordance with the hierarchy. For example, participants' reactions may occur prior to and during activities. Also, practices may change before attitude or knowledge change.

A strength of TOP is that it helps integrate educational program development and program evaluation; educators can use the same concepts in program development as they do in program evaluation. These concepts contribute as one designs and develops programs. And, these same concepts guide the evaluation of a program's performance.

The hierarchy can be used as a "single agency" programming guide as well as an "interagency" programming guide. The Introduction of TOP identified nine steps educators may use to focus programming on a strategic need or issue area. These nine steps promote interdisciplinary and interagency programming where there are mutual dependencies between educational programs and other types of programs such as research, formal education, technical assistance, financial assistance, regulation, etc.

Applying these basic concepts outlined in TOP's framework are further discussed in other

sections in this Web site.

The Hierarchy's Seven Levels Have Unique Characteristics

Level 1: SEE represents Social, Economic, and, Environmental conditions (or situations) that may need improvement. Social, Economic, and Environmental outcomes are the end results or benefits from programs targeted toward SEE conditions. These outcomes may represent public or private benefits. Social, Economic, and Environmental needs decrease as they are prevented, checked, reduced, or solved by the use of recommended practices (or behaviors).

Level 2: Practices are patterns of behaviors, procedures, or actions that influence SEE condition. Through educational programs, individuals, groups, organizations, and communities adopt practices and technologies that achieve needed SEE outcomes. These practices are adopted as program participants apply relevant knowledge, attitudes, skills, and aspirations (KASA).

Level 3: KASA refers to Knowledge, Attitude, Skills, and Aspirations that influence the adoption of selected practices and technologies to help achieve targeted social, economic, and environmental outcomes. Knowledge gain pertains to learned information or accepted advice; it also includes comprehending economic, social, and environmental principles, and comprehending individual and group decision-making processes. Attitudes focus on individuals' beliefs, opinions, feelings, or perspectives. Skills refer to individuals' mental and physical abilities to use new or alternative practices. And, Aspirations refer to ambitions, hopes, objectives, or desires. Changes in KASA can occur when people react positively to their involvement in program activities.

Level 4: Reactions reflect participants' degree of positive or negative interest in topics addressed, their acceptance of activity leaders, and their attraction to the educational methods. Delivering relevant, research-based subject matter can help hold clientele interest. People may obtain information, education, or assistance from different agencies or organizations at the same time. Thus, the way they react to an activity sponsored by one organization may be influenced by complementary activities that are sponsored by other agencies or organizations.

Level 5: Program participants include individuals, families, groups, organizations, or communities. Participants must be sufficiently involved in program activities to acquire KASA and adopt practices needed to improve SEE conditions. Duration, continuity, frequency, and intensity of program participation all contribute to amount of KASA change.

Level 6: Activities are the various educational strategies and events used to inform, educate, or train target audiences. They range from direct personal contacts to indirect technological or mass media approaches. Program activities are determined by requirements to obtain positive reactions from participants as well as other factors needed to achieve desired changes in KASA and practices. Program activities are supported by program resources.

Level 7: Resources are time, money, and staff (including volunteers) used to plan, promote, implement, and evaluate programs. Resources also include research-based educational materials, organizational maintenance, communication technologies, and transportation.

History of the Hierarchy

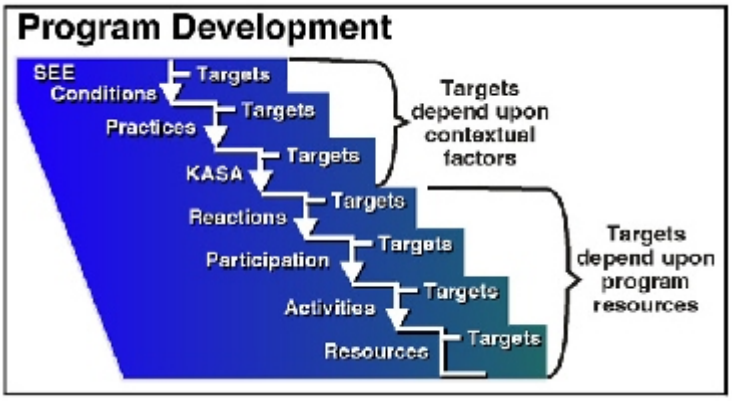
TOP's seven-level two-sided hierarchy (Bennett & Rockwell, 1995) has been tested since 1994. It is an outgrowth of Bennet's hierarchy (Bennett, 1975 & Bennett, 1979). Both have common characteristics with Suchman's logic model (Suchman, 1967) and the levels in Kirkpatrick's model (Kirkpatrick, 1967 & Kirkpatrick, 1987) for evaluating training. These are:

Level 1. Reaction - What is the participants' response to the program?
Level 2. Learning - What did the participants learn?
Level 3. Behavior - Did the participants' learning affect their behavior?
Level 4. Results - Did participants' behavior changes affect the organization?

Assessing Needs and Opportunities

Needs and Opportunities Are Assessed to Plan Programs

Need and opportunity assessments intersect and overlap, and form the basis for outcome and impact evaluations. On the program development side, needs assessment occurs at the upper three levels: SEE, Practices, and KASA. Opportunity assessment occurs at the lower four levels: Reactions, Participation, Activities, and Resources.



Needs Reflect a Vision for a Better Future

"I have a dream..."
Martin Luther King, Jr. had a VISION - - - a VISION for a better future for all people.

Often it is the vision of a better future that identifies social, economic, and/or environmental conditions that need changing. The belief that society needs to, and can, change to attain that vision is a major reason that educational programs are needed.

Citizens Participate in Program Development Through Needs Assessment

Citizens need to participate in decisions that affect their lives and the communities in which they live. Through needs assessment, citizens become involved in educational programming as they provide information about their social, economic, and environmental concerns. Scientific research also is used to understand the conditions and people to be affected by educational programs. These same information gathering methods are also used to obtain public reactions to new programs as well as to set priorities among alternatives.

Needs assessment draws upon two fundamental approaches: the social indicators approach and the self-report approach.

Social Indicators Approach

The social indicators approach assumes that the nature of social, economic, and environmental needs are known, and that outcomes can be measured by changes in indicators. It presumes that objective indicators can be found to rate social, economic, and environmental conditions. Thus census statistics such as infant mortality rates, household income levels, and biological/chemical assessments of water contaminants are understood to be objective indicators of how well a community or society is meeting citizens' needs.

Self-Report Approach

On the other hand, legislators, policy makers, and leaders of public and private agencies and organizations also use self-reported need assessments (citizen committees, public hearings, forums, public records, focus groups, surveys, etc.) to gauge public opinion, sort out special interest groups, and organize effective citizen action groups. Self-report strategies assume that citizens understand their needs, but that decision makers may not.

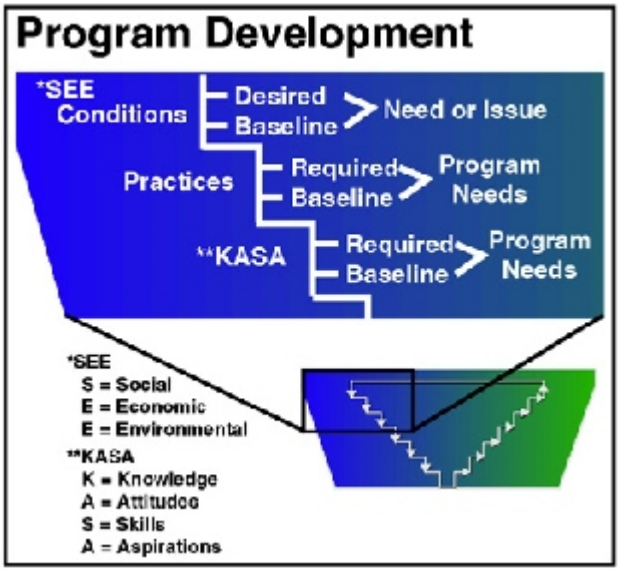
Programs are Developed in Response to SEE Needs

Thus, unmet or partially met social, economic, or environmental needs are identified by comparing a desirable vision with the current observed performance (or baseline condition).

This comparison identifies gaps between "what is" and "what should be." Comparing the desired SEE condition with the current (or baseline) condition serves to assess social, economic, and environmental needs around which programming should be developed.

Improving the SEE condition requires adopting certain practices or behaviors. And in order to

adopt them, people must acquire specific knowledge, modify attitudes, acquire or improve skills, or alter aspirations (KASA). At the practices and the KASA levels, the gaps between the required practices and KASA and the actual practices and KASA identify programming needs. The actual practices and KASA become the baseline against which one begins to measure progress and determine program outcomes.



Assessing Needs and Opportunities Involves the Public in Decision Making

A former public school health nurse describes how she used TOP to assess the need for public school nurses and identify the opportunities they have to meet parental expectations. While this needs assessment provided the basis for testimony at a legislative hearing and impacted state legislation, it also helped the public school health program identify public expectations.

Text version of a user's video.

I've worked with public school health programs for a number of years and value the contribution school nurses bring to the educational system in both the elementary and secondary schools throughout the state. However, recently the comprehensive linkage between health and education has come under question as schools face increased scrutiny generated by the public's concern for responsible fiscal management. Assumptions that the school nurse provided a valuable and worthwhile service in the institution were questioned.

Therefore, we needed to gather some information to answer the question, "What was the effectiveness or value of the school health program?" There was little data available for decision makers so we needed to initiate a comprehensive evaluation focused on program impact. To accomplish this, I used TOP as I developed a strategy to find out how parents and teachers felt

about the school nurse's role. The top four levels of the hierarchy: Social conditions, practices or behaviors, knowledge and attitude, and participant reactions were used to develop questions to ask stakeholders.

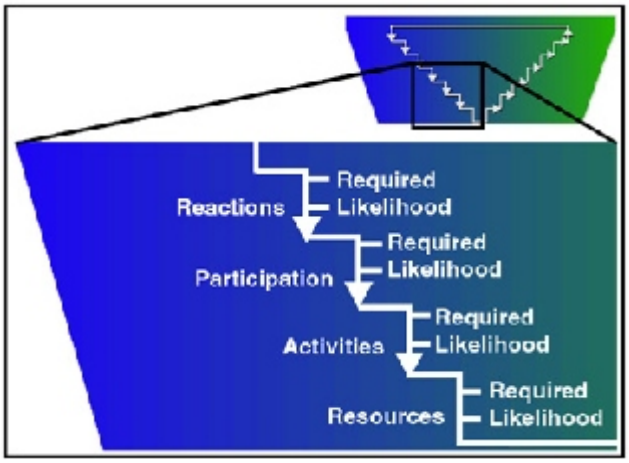
First I conducted several focus group interviews to identify expectations of school staff, parents, and state legislators. I then used these expectations to develop a survey instrument which was distributed to 1200 randomly selected parents throughout the state. Results helped identify what kind of outcomes the public expects from the school nurse program. These expectations helped identify specific targets for the school nurse program and affirmed the need for the program in meeting certain social expectations of the public school system.

The public expectations for the school nurse program were presented at a public legislative hearing on a resolution that was pending in the state Unicameral. Following the testimony from this study, the state legislature passed the resolution. Presenting the findings at the public legislative hearing was the best way we could share the public's voice with those who make legislative decisions. While the testimony led to the passage of a state-wide resolution, we benefitted much more from the needs assessment. It helped us identify and define our goals and objectives at each of the seven levels in TOP. And we are confident that these goals and objectives are meeting parent and teacher expectations for the school nurse program.

Opportunity Assessments Determine Program Possibilities

Through opportunity assessment, educators gauge the probability that their programing can significantly reduce needs identified at the SEE and practices levels. Opportunity assessment goes beyond just defining needs or issues. Using opportunity assessment to gauge programming, agency and organizational leaders:

- Develop alternative solutions that will reduce needs
- Evaluate the alternatives
- Choose a course of action
- Implement the course of action



At the reactions level, public responses may be solicited to gauge interest in programs to address the social, economic, and environmental issues. Such gauging of reactions can help set priorities among alternatives. Opportunity assessment entails estimating the reactions that will be required from the target audience, the scope of participation needed in various activities, and the resources that will be required to effect change at the KASA, practice, and SEE levels. The higher the likelihood of obtaining the necessary reactions, participation, activities, and resources, the greater the opportunity for educational programming to significantly reduce the identified social, economic, and environmental needs.

But can educational programming alone achieve the desired changes in practices and SEE in a timely manner? If the answer is that financial and/or technical assistance, and/or individual counseling also will be required, then it is advisable to recruit appropriate program cooperators who can make these contributions in a timely manner.

References that describe techniques to assess needs and help identify programming opportunities include: Butler & Howell, 1980; Johnson, et al., 1987; Krueger, 1994; McKillip, 1987; Morgan & Krueger, 1998; and Witkin & Altschuld, 1995.

TOP's framework illustrates the placement of need and opportunity assessments in the program development process so that program targets (or specific objectives) can be established. In objectives-based evaluation, these targets (objectives) become points on yardsticks used to measure outcomes and program performance.

Program Leaders Assess Needs and Opportunities to Identify and Implement Programs

A state program leader in a public agency describes how her agency addresses federal, state, or local high priority needs/issues that are identified:

Text version of a user's video.

I'm a program leader in a public agency whose mission is to address the needs of people in our state by using nonformal education. We find that social, economic, and environmental concerns that require information, education, and training programs cut across federal, state, and local interests. To address a need, we compare the capacities we have in our nonformal educational system with those of other public and private agencies and organizations who rely on other approaches such as formal education, financial incentives, technical or other assistance, or regulations and penalties to reduce an identified need. We try to determine whether the described impact can be achieved most cost-effectively by educational programs alone or by collaborating with other agencies or organizations using alternative approaches. We make a decision to initiate programming in our publicly funded agency when following questions receive a positive response:

- *Will the program address public needs that are high priority?*
- *Can the concerns be reduced through nonformal educational programming?*
- *Is the educational program in a strong position, relative to programs of other public sector agencies and private sector organizations, to achieve positive outcomes?*
- *Can an educational program be developed that complements programs of related public agencies and private organizations?*
- *Can we redirect or obtain the financial resources needed to support the programming?*
- *Do we have qualified staff, can we redirect staff, or can we hire qualified staff to implement the programming?*

Inter-Organizational Collaboration

Improving SEE Conditions May Require Inter-organizational Collaboration

Agencies and organizations frequently must collaborate with each other to develop information, nonformal education programs, and training activities to effectively reduce social, economic, and environmental concerns. To develop effective programming, agencies and organizations may also use a variety of other approaches such as formal education, financial incentives, service providers, technical assistance, and regulations and penalties.

People, groups and organizations work together to achieve desired results through networking, cooperation, coordination, coalitions, or collaboration. Hogue (1993) describes these five levels of relationships according to purpose, structure, and process in the matrix "Community Linkages - Choices and Decisions" as copied below:

Levels	Purpose	Structure	Process
Networking	• Dialogue and common understanding • Clearinghouse Dialogue and common understanding • Create base of support e for information	• Non-hierarchical • Loose/flexible links • Roles loosely defined • Communication is primary link among members	• Low key leadership • Minimal decision making • Little conflict • Informal communication
Cooperation or Alliance	• Match needs and provide coordination • Limit duplication of services • Ensure tasks are done	• Central body of people as communication hub • Semi-formal links • Roles somewhat defined • Links are advisory • Little or no new financial resources	• Facilitative leaders • Complex decision making • Some conflict • Formal communication within the central group
Coordination or Partnership	• Share resources to address common issues • Merge resource base to create something new	• Central body of people consists of decision makers • Roles defined • Links formalized • Group leverages/raises money	• Autonomous leadership but focus is on issue • Group decision making in central and subgroups • Communication is frequent and clear

Levels	Purpose	Structure	Process
Coalition	• Share ideas and be willing to pull resources from existing systems • Develop commitment for a minimum of three years	• All members involved in decision making • Roles and time defined • Links formal with written agreement • Group develops new resources and joint budget	• Shared leadership • Decision making formal with all members • Communicatio n is common and prioritized
Collaboration	• Accomplish shared vision and impact benchmarks • Build interdependent system to address issues and opportunities	• Consensus used in shared decision making • Roles, time and evaluation formalized • Links are formal and written in work assignments • Resources and joint budgets are developed	• Leadership high, trust level high, productivity high • Ideas and decisions equally shared • Highly developed communication systems

Huxham (1996, pp. 14-15) describes collaborative advantage as being concerned with the creation of synergy between collaborating organizations. Such advantage focuses on outputs of collaboration that could not have been achieved except through collaborating. Huxham's definition is:

Collaborative advantage is achieved when something unusually creative is produced - perhaps an objective is met - that no single organization could have produced and when each organization is able to achieve its own objectives better than it could alone. In some cases, it should also be possible to achieve some higher-level . . . objectives for society as a whole, rather than just for the participating organizations (Huxham, 1993, p. 603).

TOP Helps Single Agency or Interagency Programming

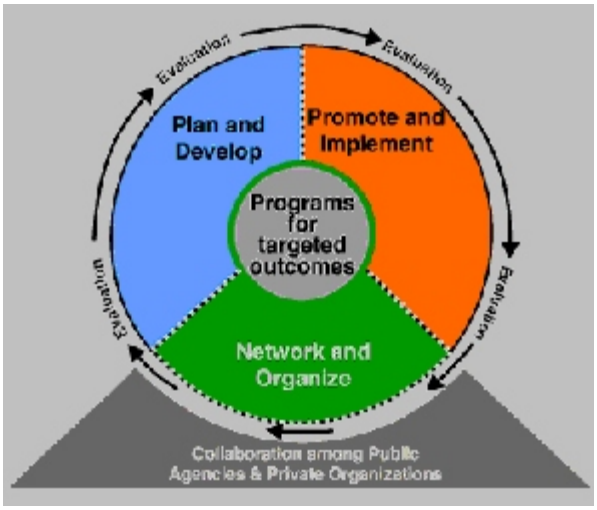
TOP was first developed within Cooperative Extension to help staff plan their program

evaluation efforts. However, the principles suggested in TOP apply in any public sector agency, private sector organization, or coalition of several agencies and organizations that use educational or training programs to improve social, economic, or environmental conditions.

While TOP can be used as a "single agency" programming guide, it also can be used for interdisciplinary and interagency programming when agencies, organizations, or institutions focus on a strategic need area and use the nine steps identified earlier. These nine steps promote interdisciplinary and interagency programming based on interdependence models (Bennett, 1992 and 1993). And TOP's framework provides a structure in which mutual dependencies can be identified between nonformal educational programs and other types of programs such as research, formal education, technical assistance, financial assistance, etc. for collaborative programming.

TOP can be used in all types of programming designed to transfer information through both formal and nonformal education and training activities. These education and training activities might be part of a broad program , or initiative, and they might be supplemented with financial incentives, technical assistance programs, or other types of assistance (i.e. child care, travel reimbursements, money for equipment, etc.).

Collaborative Efforts Help Achieve Desired Outcomes



Text version of a user's video.

The diagram "Collaborative Foundation for Achieving Targeted Outcomes" illustrates collaborative efforts among public agencies and private organizations. These are a foundation to deliver programs that achieve desired outcomes.

Programming partners must work together as they

- *Network and organize a program*
- *Plan and develop the program*
- *Promote and implement the program*

However, each agency or organization may have independent goals for planning, developing, promoting, and implementing a program that falls within the scope of their respective missions. Throughout the programming process, evaluation helps:

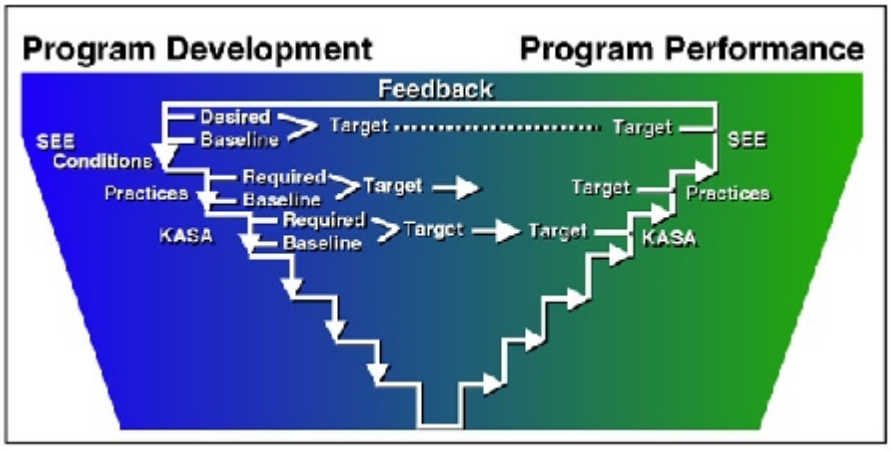
- *Educators know if their programs are working so necessary adjustments can be made*
- *Stakeholders know if the resources are being used effectively to achieve the desired outcomes*
- *Target audiences know if they are achieving desired social, economic, and environmental outcomes.*

Setting Targets

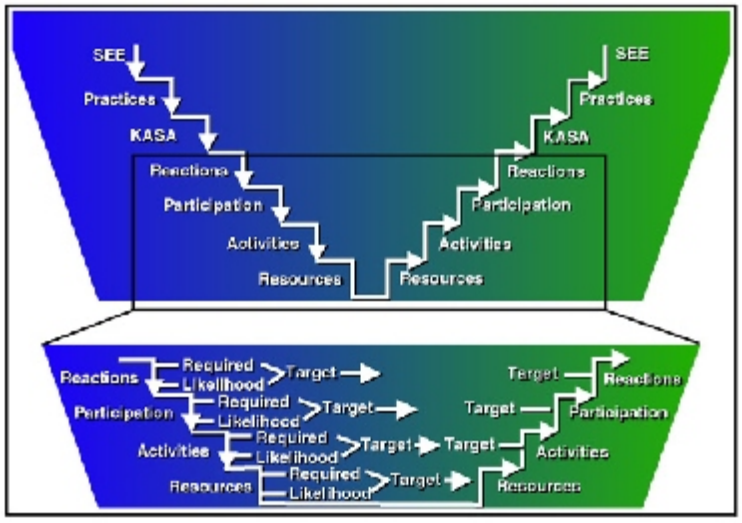
Targets are Based on Need and/or Opportunity Assessments

Targeting a realistic outcome, i.e., establishing a result to be achieved by a given date, is based on several factors. These include: inputs by citizens who have a stake in the relevant matter; use of records pertaining to the relevant geographic area; expert assessment of the severity of the problem addressed; staff experience in estimating what is realistic to achieve within a defined time period based on research and past assessments of comparable programs; consideration of available programming resources as well as resources for monitoring and evaluation over the time period; parallel and collaborative, as well as the divergent, work of other public and private sector influences on outcomes; and overall factors such as those related to the variability of weather conditions and local and national economic viability (Marshall & Bennett, 1998); (Röling, 1986).

Needs assessments provide a basis for establishing targets at the top three levels in the hierarchy. At the SEE level, the desired condition is compared with the baseline condition to establish a target for an overall program goal. At the Practices and KASA levels, required conditions are compared with baseline conditions to establish specific program targets. A difference between desired and baseline conditions determines goals and objectives established on the program development side of the hierarchy; on the program performance side of the hierarchy, evaluations measure how well targets are accomplished.

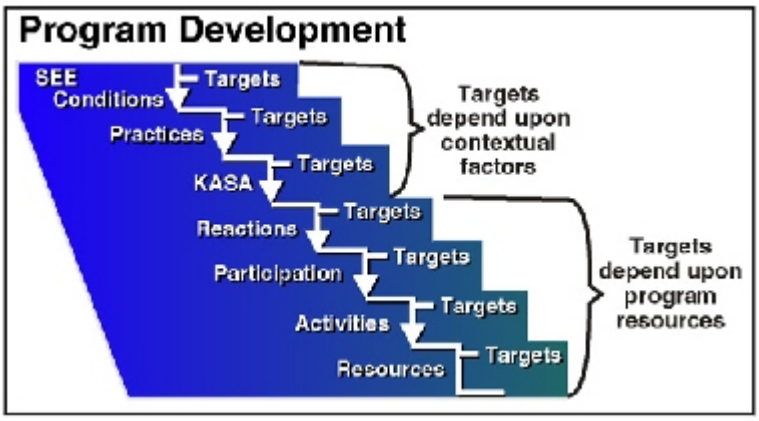


Opportunity assessments at the Reactions, Participation, Activities, and Resources levels help agencies and organizations identify appropriate programming within the scope of their mission and resources. To establish targets at each of the four lower levels, required conditions are compared with the likelihood that these conditions can be met; on the for program performance side, evaluations measure how well the targets are accomplished.



Targets Are Measurable Conditions to Be Reached in a Defined Time Period

Targets, or objectives, are set when programs are designed. To set targets, program developers interact with stakeholders who have a direct interest in the topic.



On the program development side of the hierarchy, targets can be set at some, or all, levels. Targets at each level are intended to contribute to decreasing the social, economic, and environmental problems of individuals or the larger society. Targets at the SEE, practices, and KASA levels generally represent compromises between desired and feasible outcomes. Actual outcome targets depend upon:

- Contextual factors such as background variables; local, regional or national circumstances; unique settings; human conditions, etc.
- The strengths of targets that can be set at the resources, activities, participation, and reactions levels

In program development, targets can be set for amount of program resources, types and numbers of activities, numbers and types of participants, and reactions necessary to achieve the targets at the upper three levels. Targets at the reactions, participants, and activities levels generally represent compromises between required outcomes and what is feasible given available resources. Targets at the resources level generally are a compromise between what is required and what is affordable.

Educators Use Targets in Programming

Text version of a user's video.

I'm at a Great Plains University where I develop and carry out Cooperative Extension education programs to help agricultural producers and others protect water quality. EPA has set maximum contaminant levels (mcls) for public water supplies to help assure that safe drinking water is provided. These mcls become water quality targets to be maintained or achieved as a result of an education program. An example of a target at the "environmental" level in TOP is to keep the concentration of nitrate-nitrogen in an aquifer at less than 10 parts per million which is the mcl for nitrate-nitrogen.

To accomplish the water quality goal, we set targets at the "practices" level for adoption of a variety of water and nitrogen application practices with an emphasis on irrigated corn. In order for agricultural producers to change their nitrogen and water application practices, they need a greater understanding about all the factors that influence ground water nitrate levels so we set educational goals (or targets) at the KASA level. In order to interest farmers and have them react positively to educational programming, we set targets at the "reactions" level for marketing the educational program so we will involve the necessary participants. We then follow-up with setting targets (or goals) at the "participation" level that will include agricultural producers, farm input suppliers, independent consultants, and other interested stakeholders. After that we develop, test, and deliver the "activities" needed to involve agricultural producers and agribusinesses in learning better nitrogen and water application practices. Once we've set targets at all the programming levels, we have to set targets for the program input resources such as professional and volunteer staff as well as financial operating support.

Throughout the target setting process, we work in teams to achieve a broad base of educational activities and include all appropriate technical expertise. The overall program may include producer financial assistance such as cost sharing on implementation of Best Management Practices. The financial assistance is the responsibility of other state or federal agencies. As we cooperate with each other on a unified program, we build a quality program in the most cost effective manner and create a situation where we are more likely to reach our goal of ensuring a safe water supply.

I've described our programming in a linear manner according to the levels in TOP's hierarchy. However, we I actually bounce back and forth among these levels as we develop and implement programming. I've also focused primarily on an environmental outcome. In actual programming, we would also consider the economic impacts to both agricultural producers and agribusiness as well as the broad community. In addition, we consider social issues such as human health which can be impacted by water quality.

Setting targets at each of the levels in TOP may seem rather laborious. In reality, the levels in TOP's hierarchy help us set futuristic, yet realistic, goals and objectives which we can measure later when we want to identify program impact.

Feasible Targets Answer the Questions "How good is good? How good is good enough?"

Targets must be realistic if they are to be achieved within a defined period of time. In program design, need and opportunity assessments are used to help establish realistic targets. These assessments help answer the question, "What is a plausible program?" (Mayeske, 1994; 5.1).

Within TOP's hierarchy, these assessments pose a series of questions to determine the likelihood that a program will achieve desired outcomes. Questions for setting targets include:

1. Will the targets for SEE conditions be achieved if the targets for practice use are

achieved?

2. Will the targets for practices be achieved if the objectives for KASA are achieved?
   - Can information or education alone bring about the adoption of the targeted practices?
   - Are other inducements to voluntary practice change also needed, e.g. subsidies, loans, cost-sharing, or technical assistance?
   - Is there a role for regulation in effecting targeted practice change?

3. Will KASA targets be reached if participants react to the program activities according to the targets set at each of these levels?
   - Is it plausible that the program activities will involve the appropriate clientele in such a manner that they can and will achieve the KASA and practice change targets?

4. Will the resources targeted sufficiently support the activity targets? ·
   - Are qualified program staff available and is it likely that sufficient funding can be obtained from public and private sector sources?

The question of plausibility of program effectiveness is not only a matter of logic. Röling (1986) warns that realistic target setting requires much attention to prior feedback, and careful study into, or experience with, targeted conditions and linkages. Only much understanding of program conditions and potential influences allow for specificity in setting targets (quantitative objectives). Conversely, lack of understanding of the system in which the program operates and how the program interacts with this system may lead to setting impossible or unrealistic targets with negative consequences. Röling (1986) maintains that flexibility, i.e., refraining from setting quantitative objectives in favor of process planning, is advisable when there is little prior experience and/or previous research or evaluation data regarding the program being planned.

TOP's Seven Levels Suggest Questions for Program Development

Descending the hierarchy poses a series of questions for program developers as they assess needs and opportunities, design programs, and assess the effectiveness of the program design. The following questions help to develop program plans in such a way that progress toward achieving intended outcomes may be tracked and performance evaluated.

SEE
- How do the present social, economic, and environmental conditions compare with the desired social, economic, and environmental conditions?
- What public and private program benefits are needed?

Practices

- What practices must people adopt to effect the SEE targets?
- How do necessary practices compare with current baseline practices?

KASA

(Knowledge)

- What knowledge do people require to see the need for, and to effect changes in the practices?
- How does their current knowledge compare with the required knowledge?

(Attitudes)

- What types of attitudes are needed to effect changes in the practices?
- How do current attitudes compare with the desired attitudes?

(Skills)

- What skills are needed to effect changes in the practices?
- How do present skills compare with the necessary skills?

(Aspirations)

- What desires, hopes, or ambitions are needed to effect changes in the practices?
- How do present desires, hopes, or ambitions compare with the desired ones?

Reactions

- Given their interest in comparable activities, how is the target audience likely to react to program activities?
- What kind of promotional strategies are needed to attract the target audience(s)?
- How likely is it that the program activities will engage and retain the interest of the target audience(s)?

Participation

- Who is included in the target audiences, i.e. intended program participants?
- What is their current involvement with the issue compared to the desired involvement?

Activites

- What is the subject matter that is needed for learning, or acceptance by the audience?
- What programs or activities are currently available that support transmitting the subject matter to the intended audience? How do they compare with what is needed?
- What delivery methods (current and potential) are desirable?

Resources

- What professional staff and volunteer expertise, and other resources, are needed to support the activities? How do they compare with what is currently available?
- What financial and in-kind resources are needed? Are they available or are there sources from which they can be obtained?

Indicators

Indicators Observe Measurable Characteristics

Indicators are used to represent targets. They are measurable characteristics that also can help tell how well targets are achieved and how well a program is performing.

Indicators can be objective, subjective, or both.

For objective indicators, data are collected through direct observations of what people overtly do or receive, as well as observations of natural phenomena. Data collection processes include gathering information through statistical records, administering objective tests to participants, third party observations of a situation, etc.

For subjective indicators, data are collected through self-report processes by program participants themselves and/or others who may be affected by a program.

Examples of objective and subjective indicators at each level in the hierarchy

SEE

Objective Indicators: Life expectancies, profit-loss statements, and indices of air and water quality.

Subjective Indicators: Public satisfaction with personal health; economic status; and cleanness of air, land, and water.

Practices

Objective Indicators: external (direct, "third-party," unbiased) structured observation of program participants' adoption and use of recommended practices and technologies.

Subjective Indicators: reports/ratings by program teams or program participants of their adoption and use of recommended practices and technologies.

KASA

Objective Indicators: test scores or validated scales of knowledge, attitudes, skills, and aspirations.

Subjective Indicators: participants' assessments of their knowledge, attitudes, skills, and aspirations.

Reactions

Objective Indicators: external structured observation of participant attention to subject-matter content of program activities.

Subjective Indicators: participants' ratings of their interest in subject-matter content of program activities.

Participation

Objective Indicators: external structured observations of attendance at program activities, volunteer leadership in conducting program activities, etc.

Subjective Indicators: participants' reports of their attendance at activities, volunteer leadership in program activities, etc.

Activites

Objective Indicators: external structured observation of frequency, duration, methodology, and content of program activities.

Subjective Indicators: program staff reports on the manner in which activities were conducted and their frequency and duration.

Resources

Objective Indicators: external observations of staff time expenditures relative to program assignments.

Subjective Indicators: staff retrospective reports regarding their time expenditures relative to program assignments.

Using indicators in the hierarchy

Indicators at the SEE, practices, and KASA levels focus on community or society needs as well as on the individuals who live within the community. These indicators are used to identify specific outcome objectives, and also to measure any changes relative to these targets. These indicators are also used to plan data collection procedures for identifying program outcomes and impact.

The social indicator approach presumes that objective indicators can represent social, economic, and environmental conditions, and that outcomes can be measured by changes in these indicators. Thus, statistics such as infant mortality rates, household income levels, and parts per million of water contaminants are understood to be objective indicators of how well a community or society is performing its task of meeting citizens' needs. Many factors beyond an individual program can impact these indicators. In addition, indicators at the SEE level are often difficult to measure, may take years to change, and usually are expensive to track.

Indicators at the practices level can target clientele actions, or groups of actions that are defined by a program. Changes in these indicators can be measured within days or months after specific program activities occur, or over a number of years as defined by expected timing of practice adoption.

Indicators at the KASA level can range from identifying outcomes immediately after activities have been implemented to more lasting changes that occur over several months.

Indicators at the reactions, participation, activities, and resources levels focus on program implementation. These indicators are used to identify specific programming objectives, identify specific data collection needs, and document how the program is carried out. Many times, indicators are also used to specify data collection needs for program improvement purposes. Data for indicators at these levels are the easiest and least expensive to collect.

Indicators Apply to Specific Program Targets and Outcomes

Educators identify program indicators based on their needs for program improvement and organizational accountability. Based on these needs, programmers will identify one or more indicators for each intended outcome they measure.

Examples of outcomes and outcome indicators for programs in various human service agencies or youth- and family-serving organizations are illustrated by United Way of America in their "online resource library" on their web site.

Characteristics of Impact Indicators

A state program leader describes the characteristics she looks for when staff identify the program indicators they will use to demonstrate how well targeted outcomes are met by the program.

Text version of a user's video.

I work in the state office of an educational agency that is a state, federal, and county partnership. Our mission focuses on delivering nonformal education to people throughout the state and we have to demonstrate that our programs are worthwhile. Therefore, educators are required to develop programming plans that include the indicators they will use to measure if their programming achieves the targets they set. As I work with programmers and review their programming plans, I ask a number of questions to help judge the appropriateness of indicators.

1. Are the indicators valid? Do the indicators accurately focus on the outcomes and describe the program's situation? Are they observable and measurable?

2. Are the indicators universal? Do the various indicators link together to provide a broad picture of the program and its targeted outcomes? Do they cover enough levels in the TOP

framework?

3. Does each indicator tell what characteristic or change will be counted? Does the indicator tell the amount of change that is expected? Will the indicators reflect both positive and negative outcomes?

4. Will the indicators enable generalizing from sample data to larger populations? Can data be obtained from a sample of the population that will accurately represent the total program?

5. Are the indicators broad enough that they can be cumulative across various activities with a program? Will the data accommodate variations in sites, activities, and outcomes?

6. Are the indicators affordable? Are resources available to gather the data or the acceptable evidence for the indicators?

These questions help us focus on appropriate program indicators. I've found that program staff intuitively question the effectiveness of their programs by observing changes in participants. By focusing on indicators, program staff can document and report their observations so we know what outcomes are occurring relative to high priority social, economic, and environmental issues.

Additional References about Indicators

For a general discussion about indicators, see United Way of America's 1966 book, Measuring Program Outcomes: A Practical Approach. Useful excerpts and ordering information are available online at http://www.unitedway.org/outcomes/.

Evaluating Outcomes

Program Effectiveness is Judged by Evaluating Performance

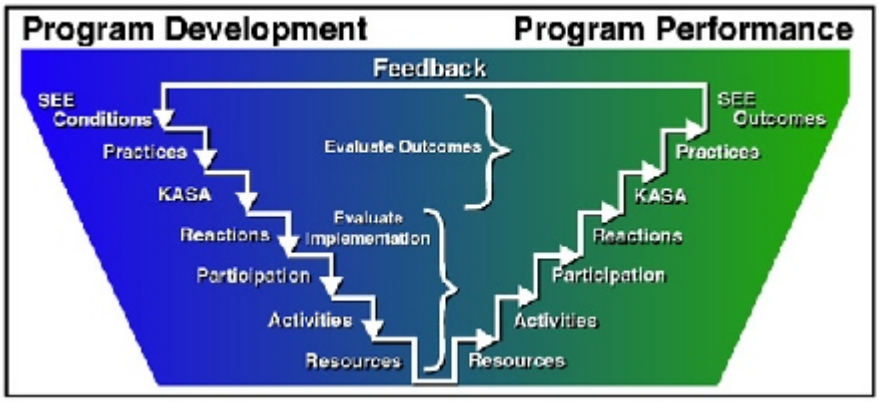
Program evaluation serves two purposes. First, it helps decide if a program should be continued and, if so, ways to improve its goals and delivery. Second, it documents accomplishments by an organization or agency.

Program performance evaluation generally ascends TOP's "programming staircase" on the right-hand side of the model. Program performance evaulation can include process evaluation, outcome evaluation and impact evaluation. Program performance evaluation can focus on one or more of the seven levels.

Process (or implementation) evaluation generally occurs at the lower four levels: Resources, Activities, Participation, and Reactions. Process evaluations assess the extent to which a program is operating as intended. Typically it assesses program strategy and specific program activities.

Outcomes are associated with TOP's upper three levels: KASA, Practices, and SEE. When outcomes are thought of in this manner, they reflect what happens in people's lives or in communities that lead to a better living style, both on a personal and a societal basis.

Feedback at the lower four levels can reveal changes needed in programming as well as potential changes in KASA and Practices. Feedback about changes in peoples' KASA, as well as their use of desired practices, reveals potential changes in social, economic, or environmental conditions. Such feedback helps stakeholders identify degree of progress in achieving intended outcomes. Such information can help stakeholders decide whether to continue or modify a program.



Outcome Evaluation Assesses How Well Program Targets are Achieved

During program development, targets or quantitative objectives are set at some or all levels in the hierarchy based on need and/or opportunity assessments. Outcome evaluation assesses the extent to which the targets at the upper three levels are achieved. It focuses on program outputs as well as on benefits or changes for individuals or populations (including unintended effects).

Documentation at the Resources level explains the scope of the programming effort in terms of dollars expended and staff time used. Progress documented at the Activities and Participation levels generally is referred to as outputs. It indicates the volume of work accomplished and is evidence of program implementation. The hybrid output/outcome that can be measured immediately after program activities, Reactions, is evidence of participants' immediate satisfaction.

Following program delivery, intermediate outcomes at the KASA level focus on knowledge gained/retained, attitudes changed, skills acquired, and aspirations changed. Intermediate

outcomes at the Practices level focus on the extent to which best management practices are implemented by program participants and others whom they may influence. These intermediate outcomes can be measured months or years after program implementation. Intermediate outcomes lead to longer term social, economic, and environmental changes. Identifying outcomes at the SEE level for individuals and localities may occur fairly quickly but state, regional, or national outcomes may take years to assess and be very expensive.

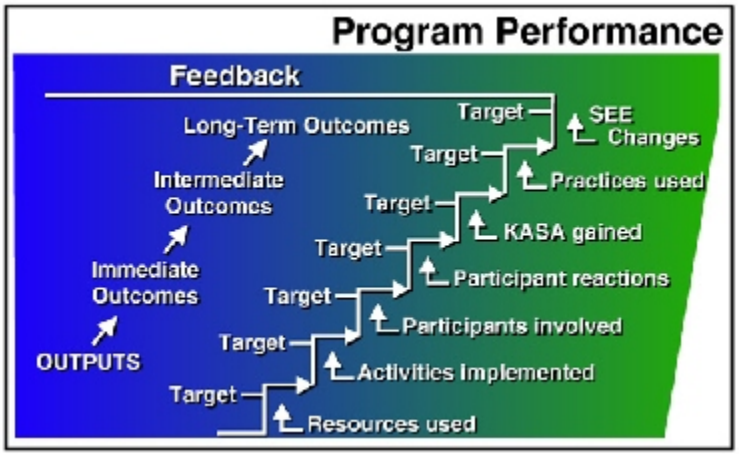
Impact Evaluations Assess Program Contributions to Achievement of Outcomes

The "Introduction to TOP" defined it to "include a practical hierarchy for (a) targeting outcomes (b) tracking progress twoard achieving targets, and (c) evaluating the degreee to which programs impact targeted social, economic, and environmental conditions." Discussions of TOP so far has encompassed the first two aspects of TOP.

The third aspect of TOP refers to evaluation program impacts. Program impact evaluation, i.e., assessing program contributions to achievement of outcomes, is not discussed here due to its complexity and high demands for evaluation resources. The importance of impact evaluation and study designs used to evaluate program impacts are discussed relative to the hierarchy in Bennett and Rockwell (1995, pp. 18-23).

In brief, outcome evaluation only suggests program effectiveness toward achieving intended outcomes. Outcome tracking by itself provides little or no assurance that outcomes can be attributed to a program. There may be explanations other than the program for the observed outcomes (Perrin, 1999, p. 374). Thus, when outputs are evaluated as a means to assessing program effectiveness, it should be clarified that data only associate observed outcomes with program outputs (Bernstein, 1999, p. 89).

Program impact evaluations demonstrate that program outputs cause or influence identified outcomes (General Accounting Office, 1998). Thus, program impact evaluations generally are more useful than program outcome evaluation in providing information to judge and improve program effectiveness.



TOP's Seven Levels Suggest Questions for Program Evaluation

Ascending the hierarchy poses a series of questions for evaluators as they assess program implementation, identify outcomes associated with program outputs, and identify program impacts. The following questions help evaluators track the direction of outcomes and identify how well targets have been reached.

(Evidence of outcomes for individuals and communities)

SEE

Have targeted and/or other social, economic, and environmental conditions improved through targeted changes in practices? How has the public (including non-program participants) been affected?

Overall, have program participants--individuals, families, and communities--been helped or hindered by changes in targeted practices? In what way? To what degree?

Practices

Have participants changed targeted patterns of behavior consistent with the program-promoted knowledge, attitudes, skills, or aspirations? In what way? To what degree? Have associates of program participants changed their behaviors?

KASA

(Knowledge)
Did participation increase awareness, understanding, and/or problem solving ability as targeted? In what areas?

(Attitudes)
Did participants change outlooks, perspectives, or viewpoints as intended? In what areas?

(Skills)
Did participants improve verbal or physical abilities, develop new skills or improve performance as targeted? In what areas?

(Aspirations)
Did participants alter ambitions, hopes, or behaviors as intended? In what areas?

Participant Reactions

(Evidence of participant satisfaction)
Did participants react to the marketing of the program activities as intended? Did they react to the activities as intended? Did they rate the activities as informative, interesting, and applicable? Did they perceive any immediate benefits? Do they anticipate potential benefits?

Participation

(Evidence of program outputs)

How many targeted participants became involved in the program activities? Which targeted customers participated (descriptive characteristics)? How extensive and intensive was their involvement?

Activites

Were the targeted program activities implemented? Was the targeted content or subject matter used? What promotional strategies worked or failed? Did the delivery methods work or fail? Did the participatory methods work or fail?

Resources

Were targeted resources expended on the program (time, money, staff)? Did allocation/expenditure of program resoruces leverage resources from other agencies or organizations?

Applying TOP

Introduction to Application Section

Visualizing and describing intended program outcomes helps focus programming around outcomes, or end results rather than around available resources and past programming patterns. By identifying a baseline for intended outcomes, meaningful evaluation criteria and methods can be selected at the onset of a program to evaluate progress and final results.

Following are a series of questions to ask at each level of the framework. These questions are intended to help you visualize and describe your intended program outcomes. You can use the questions on the Web or you can download these questions onto a personal computer. For another set of questions to use with the framework, see Steelquist, 1993.

Using these questions on the Web

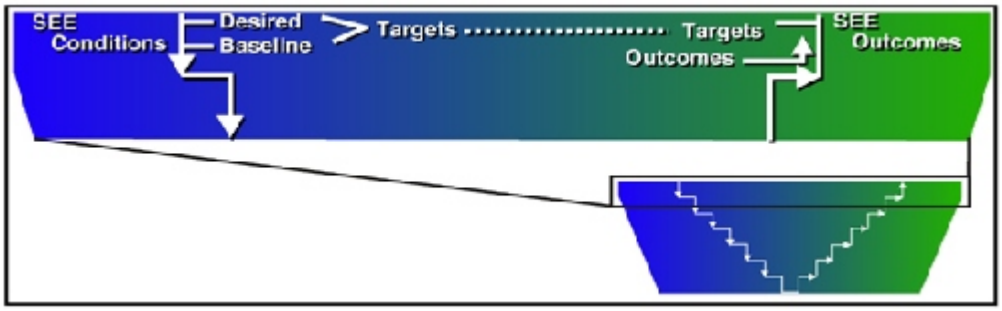
If you use these questions on the Web you will be able to take advantage of linkages to other places in TOP. However, you will be unable to insert responses to the questions. Downloading the questions to your personal computer

If you download the questions to your personal computer, you can insert responses to the questions and develop a worksheet to plan your program and its evaluation component.

However, you will be unable to link back to references in the Web program.
For help in downloading these questions go to Help. To download now, choose either WordPerfect 6/7/8 or Microsoft Word for Windows 6.0/7.0.

Questions for Level 1

Improving SEE (Social, Economic and Environmental) Conditions



Text version of Dr. Claude Bennett's video.

Programs targeted toward adult learners focus on improving social, economic, or environmental (SEE) conditions for individuals, families, and communities, as well as other broader geographical groups or regions. SEE outcomes are the end results that programs are expected to produce. SEE outcomes are the long-term program benefits.

Often needs assessments are conducted before programs are developed because there is a vision for a better future and the assumption that a program can help attain this future. Therefore, needs assessments help define the specific social, economic, or environmental need by comparing desired outcome conditions with current (baseline) conditions. This comparison identifies gaps between "what is" and "what should be." These gaps form the basis for defining targets which become broad program goals aimed at reducing the social, economic, and environmental need.

Targets at the SEE level are measurable social, economic, or environmental conditions that are to be reached in a defined period of time. Once the SEE targets are established, program outcomes can then be assessed by determining how well these targets are reached. Often the SEE level provides a broad focus that may require years of concentrated programing to achieve. Consequently, it may be unrealistic to measure SEE targets within short time frames. In addition, indicators that signal achievement at the SEE level may be very expensive to measure. Therefore, targets set at other levels in the framework may need to be used to measure progress toward the SEE targets (broad goals). Or, research that connects the Practice or KASA levels with the

social, economic, or environmental outcomes can support inferences of achievement of SEE outcomes.

Program development questions at the SEE level are:

1. What social, economic, and/or environmental condition will your program help correct or improve for
   individuals?
   families?
   groups/communities?
   agencies or organizations?
   broad groups or regions?

Condition(s) to be improved

	Social	Economic	Environmental
Individuals			
Families			
Communities			
Agencies or Organizations			
Sectors or Regions			

2. What is your vision of the corrected/improved situation?

Desired condition(s)

	Social	Economic	Environmental
Individuals			
Families			
Communities			

3. Do you need to further assess current SEE condition(s) to identify gaps between "what is" and

"what should be"?

If no, go to #4
If yes, answer the following questions on the worksheet

a. What information do you need about social, economic, or environmental, conditions in order to assess gaps?
b. What processes will you use to assess the gaps [statistical records, content analysis, direct observation, case study, social network analysis, survey, (see Salant & Dillman, 1994), key informant, nominal group process, Delphi technique, advisory groups and task forces, community meetings, focus groups, (see Krueger, 1994), etc.]?
c. When will you collect this needs assessment data?
d. From whom (or from what records) will you collect this data?

Worksheet for needs assessment at the SEE level

Specific information needed	Data collection method(s)	Date(s) for data collection	Data source(s)

Outcome evaluation questions at the "SEE" level are:

4. Do you need to and is it feasible to identify social, economic, and/or environmental changes (long-term benefits) associated with your programming?

If no, go to the "practices" level
If yes, answer the following questions on the worksheet below

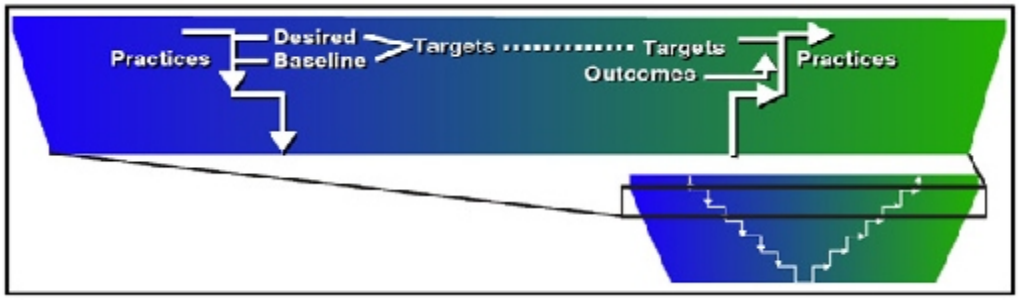
a. What specific SEE outcomes will you target?
b. What indicators will describe changes in social, economic, or environmental conditions of individuals, families, groups/communities, agencies or organizations, and/or sectors/regions?
c. What processes will you use to assess SEE outcomes [surveys (see Salant & Dillman, 1994), public records, incident reports, monitoring, Reflective Appraisal of Programs (RAP), retrospective pretest with post-test (See Rockwell & Kohn, 1989) etc.)]?
d. When will you need to collect this data?
e. From whom (or from what records) will you collect this data?

Worksheet for identifying outcomes at the SEE level

Outcomes	Indicators	Data collection method(s)	Date(s) for data collection	Data source(s)

Questions for Level 2

Practices, or Behavior Changes



Text version of Dr. Kay Rockwell's video.

Practices are patterns of behavior, procedures, or actions that influence the SEE conditions. On the program development side, "ideal" practices people must adopt to improve the SEE conditions are identified. Needs assessments can be conducted to identify the degree to which the "ideal" practices are currently being implemented and the type and extent of programming needed to develop desired practices to produce the SEE outcomes. Once targets are established at the practice level, agencies and organizations collaborate to assess the opportunities they have to establish programs that are appropriate for their mission.

Targets are measurable practices that can be reached in a defined period of time. They are identified by comparing desired practice outcomes with the current (baseline) rate at which the

practice is being used. This comparison identifies gaps between "what is" and "what should be." These gaps form the basis for defining targets aimed at improving the practices that lead to the desired social, economic, and environmental change. Targets can also be established at the practice level for each of the agencies and organizations cooperating in the programming.

Outcomes can then be assessed by determining how well the practice targets are reached. Often, it requires six months to identify if practice changes actually occur. Consequently, practice changes need to be assessed after people have had an opportunity to implement information from a program. Practice changes may also need to be tracked over a period of time to identify the degree to which they are implemented. The tracking can also confirm earlier findings from previous research that connected the practice to the SEE outcome.

Program development questions at the "Practices" level are:

1. What current behavior (or lack of it) contributes to the problematic SEE condition described previously? Behavior by
    individuals?
    families?
    communities?
    agencies or organizations?
    sectors or regions?

2. What behaviors/practices do you expect among program participants and their associates, and by when should these practices be achieved?
    individuals?
    families?
    communities?
    agencies or organizations?
    sectors or regions?

3. Do you need to further assess current practices to identify gaps between "what is" and "what should be"?
If no, go to #4
If yes, answer the following questions on the worksheet below.

    a. What information do you need about behaviors, procedures, or actions to assess gaps?
    b. What processes will you use to assess the gaps [statistical records, content analysis, direct observation, case study, social network analysis, survey, (see Salant & Dillman, 1994), key informant, nominal group process, Delphi technique, advisory groups and task forces, community meetings, focus groups, (see Krueger, 1994), etc.]?
    c. When will you collect this needs assessment data?
    d. From whom (or from what records) will you collect this data?

Worksheet for needs assessment at the practice level

Specific information needed	Data collection method(s)	Date(s) for data collection	Data source(s)

Outcome evaluation questions at the "Practices" level are:

4. Do you need to and is it feasible to identify changes in practices or behaviors associated with your programming?
If no, go to the "KASA" level
If yes, answer the following questions on the worksheet below

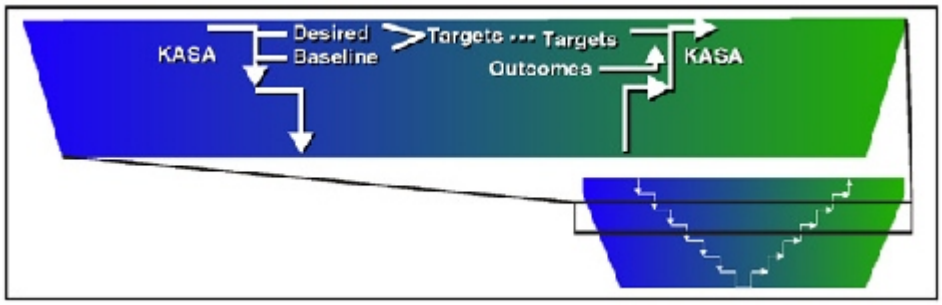
a. What specific practice outcomes will you target?
b. What indicators will you use to measure changes in specific practices, behaviors, procedures, or actions of individuals, families, communities, agencies or organizations, and/or sectors or regions?
c. What processes will you use to assess practice outcomes [retrospective pretest with post-test (See Rockwell & Kohn, 1989), pre/post tests, direct observation, surveys (see Salant & Dillman, 1994), focus groups (see Krueger, 1994), document reviews, photography, peer/parent/self-ratings, Reflective Appraisal of Programs (RAP), etc.]?
d. When will you need to collect this data?
e. From whom (or from what records) will you collect this data?

Worksheet for identifying outcomes at the practices level

Outcomes	Indicators	Data collection method(s)	Date(s) for data collection	Data source(s)

Questions for Level 3

KASA (knowledge, attitude, skill & aspiration)



Text version of a user's video.

"KASA" stands for knowledge, attitudes, skills, and aspirations.

Knowledge:
The increase in awareness, understanding, and problem solving capacity needed to effect the practices or behaviors targeted previously. The hierarchy assumes that knowledge increases before changes in practices or behaviors.

Attitudes:
The outlooks, perspectives, viewpoints, or opinions needed to effect the practices or behaviors targeted previously. The hierarchy assumes that attitudes influence better practices or behaviors. While attitudes tend to change slowly, opinions or viewpoints may shift prior to practice or behavior change.

Skills:
The verbal or physical abilities that need to develop or improve relative to the practices or behaviors targeted previously. The hierarchy assumes that skill development may be necessary to fully implement certain practices or behaviors. While it is possible to identify some skill development during an educational process, skills will generally develop and improve following the educational process.

Aspirations:
The ambitions, hopes or desires that are needed to effect the targeted practices. The hierarchy assumes that people must desire to change before there will be any meaningful practice or behavior change.

On the program development side, KASAs are needed to effect behavior or practice changes that

are identified. Needs can be assessed to identify baseline KASAs and the type and extent of programming needed to produce changes. Once these targets are established, agencies and organizations can establish appropriate programs.

KASA targets are measurable learning intended to be reached in a defined period of time. They are identified by comparing desired KASA outcomes with the current (baseline) KASAs. This comparison identifies gaps between "what is" and "what should be." These gaps help define KASA targets for the cooperating agencies and organizations.

Program outcomes can then be assessed by determining how well the KASA targets are reached. Often knowledge gain can be assessed as part of an educational activity. Attitudes generally change slowly and require lengthy time-frames to assess changes; however, opinions contribute to attitude change and tend to shift prior to attitude change. While skills can be practiced during an educational program for some immediate observations, the evaluation of skills is more meaningful after they have been applied in real life situations. Assessing aspirations immediately after program implementation helps anticipate possible outcomes at the practice level.

Program development questions at the KASA level:

1. KASA(s) of:
    - individuals?
    - families?
    - communities?
    - agencies or organizations?

2. In order for individuals, families, communities, broader groups, and/or organizations to adopt targeted practices or behaviors, what KASAs are needed, and by when should they be achieved? What
    - new knowledge is needed?
    - attitudes need to be altered?
    - skills need to be developed or improved?
    - aspirations need to be developed?

3. Do you need to assess further current KASA to identify gaps between "what is" and "what should be"?

If no, go to #4

If yes, answer the following questions on the worksheet below.

    a. What information do you need about the target participants' knowledge, attitude, skills, or aspirations to assess gaps?

    b. What process will you use to assess these gaps [content analysis, direct observation, case study, survey (see Salant & Dillman, 1994), key informant, Delphi technique, advisory groups and task forces, community meetings, focus groups, (see Krueger, 1994), etc.]?

    c. When will you collect this needs assessment data?

d. From whom (or from what records) will you collect this data?

Worksheet for needs assessment at the KASA level

Specific information needed	Data collection method(s)	Date(s) for data collection	Data source(s)

Outcome evaluation questions at the KASA level:

4. Do you need to and is it feasible to identify changes in KASA associated with your programming?

If no, go to the "Reactions" level
If yes, answer the following questions on the worksheet below.

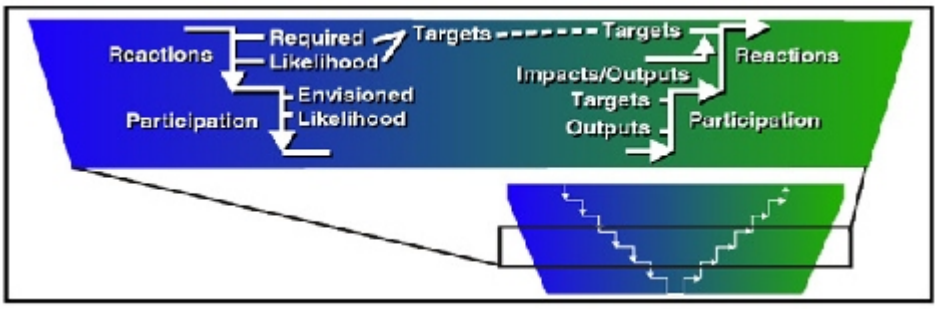
a. What specific KASA outcomes will you target?
b. What indicators can you use to measure change in specific knowledge, attitudes, skills, or aspirations of individuals, families, communities, or agencies or organizations?
c. What processes will you use to assess KASA outcomes [retrospective pretest with post-test (See Rockwell & Kohn, 1989), pre/post tests, direct observation, surveys (see Salant & Dillman, 1994), focus groups (see Krueger, 1994), document reviews, photography, peer/parent/self-ratings, Reflective Appraisal of Programs (RAP), etc.]?
d. When will you collect this data?
e. From whom (or from what records) will you collect this data?

Worksheet for identifying outcomes at the KASA level

Outcomes	Indicators	Data collection method(s)	Date(s) for data collection	Data source(s)

Question for Level 4 & 5

Participant Reactions



Text version of Dr. Kay Rockwell's video.

The reactions and participation levels can address either the organizational or program participant dimension.

FIRST, collaborative efforts may be required among agencies and organizations to implement effective programming. In addition, teamwork may be required among and within agencies or organizations if programming is to be effective. Opportunity assessment is used on the program development side to assess the likelihood that collaborative efforts and teamwork strategies can be put into place. Targets are established by comparing desired cooperative efforts with the likelihood that they can be achieved. On the program performance side, evaluation is used to check if the collaborative arrangements are functioning effectively (Taylor-Powell et al., 1998).

SECOND, the population (individuals, families, groups, communities, or organizations) you target needs to have potential program participants who are interested in the educational topics targeted in the KASA level. These program participants will need to accept the leaders and use the educational programs. Targets are established by comparing the potential participants and their reactions with the likelihood that programs will reach them. Because positive reactions are required, participant reactions and participation levels are essential to the desired outcomes. Target populations' reactions are used throughout the program cycle to change and improve the programming. While counting participants and describing their cultural, social, or demographic characteristics fails to document outcomes, it does describe the environment in which KASA and practice changes occur later at a higher level in the hierarchy. Documenting participation provides a background for understanding the breadth and depth of program outcomes.

Collaboration and team work at the "Reactions" and "Participation" levels:

1. Is there need for intra-organizational teamwork or inter-agency collaboration to reach program

goals?

If no, go to program development questions # 5
If yes, continue with #2

2. If so, which public agencies and private organizations must collaborate to effectively address the SEE conditions? What is the likelihood they will collaborate?

3. Who should participate on teams within or among organizations? What is the likelihood that effective teams can be formed?

Questions for evaluating collaboration and teamwork (see Taylor-Powell et al., 1998):

4. Will you need to evaluate collaborative efforts or teamwork strategies?

If no, Go to program development questions # 5
If yes, answer the following questions on the worksheet below.

a. What information do you need about the collaborative situations or the teamwork to assess its effectiveness?
b. What evaluation processes can you use (group meetings with staff, surveys, focus groups, videotapes or direct observations, sociograms, meeting agendas or minutes, expert reviews, etc.)?
c. When will you need to assess these cooperative efforts?
d. From whom (or from what records) will you collect this data?

Worksheet for evaluating collaborative efforts and/or teamwork strategies

Specific information needed	Data collection method(s)	Date(s) for data collection	Data source(s)

Program development questions at the "Reactions" and "Participation" levels.

5. Who are your potential participants:
individuals?
families?
groups?

communities?
organizations?

Who will represent these participants' unique perspective as a program is developed?

6. How are potential participants likely to react to the programming, given past interest in comparable situations?

7. Do you need to further assess the target audience?
If no, go to # 8
If yes, answer the following questions on the worksheet below.

a. What information do you need to better understand your potential participants?
b. What processes will you use to assess characteristics of potential participants [personal interviews with administrators, group interviews with staff, surveys (see Salant & Dillman, 1994), focus groups, (see Krueger, 1994), etc.]?
c. When will you assess your potential participants?
d. From whom will you collect this data?

Worksheet for identifying and assessing the potential participants

Outcomes	Indicators	Data collection method(s)	Date(s) for data collection	Data source(s)

Output/Outcome evaluation questions at the "Reactions" and "Participation" levels:

8. Will you need to assess participant involvement and/or their reactions to the programming?
If no, go to the activities level
If yes, answer the following questions on the worksheet below.

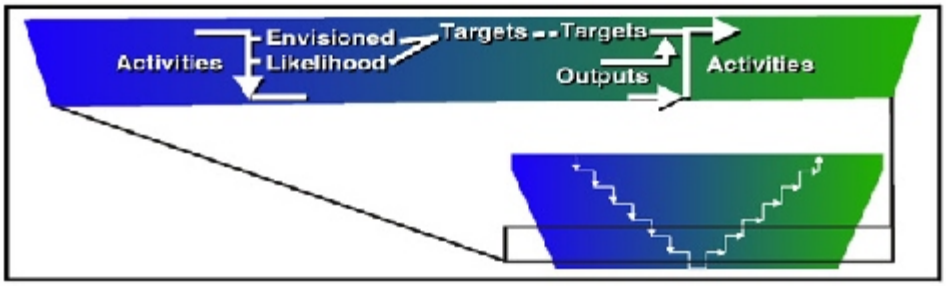
a. What do you need to know about how well your programming is reaching your target audience? What do you need to know about participants' engaged in program activities?
b. What processes will you use (attendance records, audience counts, contact records, surveys, staff reports in an electronic data base, direct observation, focus groups, end-of-session questionaires feedback forms, Reflective Appraisal of Programs (RAP), etc.)?
c. When will you collect data?
d. From whom (or from what records) will you collect this data?

Worksheet for evaluating reactions to the programming

Specific information needed	Data collection method(s)	Date(s) for data collection	Data source(s)

Questions for Level 6

Activities or Educational Processes



Text version of Dr. Claude Bennett's video.

Information is transferred to the target audience through a number of different activities within any given program. While we commonly think of activities as being the educational strategies, they can also include applied research projects or collaborative arrangements that support the educational strategies. Changes needed at the KASA and practice levels determine the activities. And a number of different activities contribute various educational segments within a broad program area. Ultimately, changes at the KASA and practice levels depend upon the frequency and intensity of the activities.

Targets are established by comparing envisioned or required activities with the likelihood that these activities will transfer information to the intended audience at their level of ability and at a convenient time and place. This comparison identifies gaps between "what is" and "what should be." These gaps help define activities that may include educational strategies, research projects, or collaborative configurations.

Output indicators involve counting the types of activities and the number of times they are implemented. They describe the educational process which contributes to change at a higher level in the hierarchy. Documenting activities will help you measure breadth and depth of program outcomes.

Questions at the "Activities" level that help develop a program and document outputs

1. What educational strategies and activities will you use to transfer knowledge at a convenient time and location to the intended audience(s)?
2. Who needs to participate in developing these educational strategies to ensure success? And what role or responsibility will each person, agency, or organization assume?
3. When will the educational events occur?
4. Do you need to document program activities?

If no, go to the resources level

If yes, answer the following questions on the worksheet below.

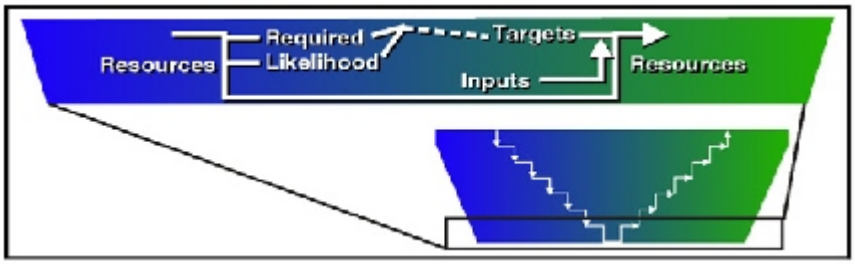
a. Which types of events and/or activities do you need to describe and/or count?
b. What methods can you use to document the program activities (work plans, staff reports, project reports, personal and/or group interviews, etc.)
c. When will you collect this data?
d. From whom or from what records will you collect this data?

Worksheet for documenting activities

Outcomes	Indicators	Data collection method(s)	Date(s) for data collection	Data source(s)

Questions for Level 7

Resources (human and financial investments)



Text version of Dr. Kay Rockwell's video.

Programming requires both human and financial investments. Therefore, resources include the paid staff and volunteers who plan, promote, implement, and evaluate the program. Resources also include educational materials, organizational maintenance, communication technologies, and transportation. Resources include the in-kind contributions of agencies and organizations, outside grants, and other financial aid.

Targets are established by comparing the envisioned or required resources with the likelihood that these resources can be allotted or obtained. This comparison identifies gaps between "what is" and "what should be." These gaps define targets for program budgets and in-kind contributions. The programing is then committed based on resources obtained.

Inputs - Counting staff and volunteer time along with financial support describes the amount of support a program has, so you can evaluate whether to expect changes at higher levels in the hierarchy.

Questions about "Resources" to help understand the programming scope:

1. How many human resources are currently available or likely to be available? And how long will human resources be needed?
    professional staff?
    paraprofessional staff?
    support staff?
    volunteer staff?
    other?

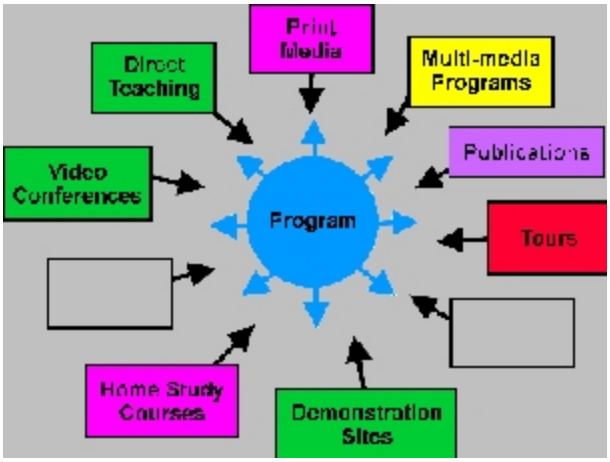
2. What financial resources are needed? And for how long?
    currently available from the organization or agency?
    currently available from other sources?
    anticipated from the organization or agency?
    anticipated from other sources?

3. What processes will you use to document human resource commitments (percentage of F.T.E. committed, staff and volunteer time reports, etc.)?

4. What processes will you use to document financial resources committed (review of budgetary records, agency/organizational reports, in-kind donations, etc.)?

Definitions

Activities -- What the program does with its resources in order to fulfill its mission. Activities include the strategies, techniques, and types of treatments that comprise the program's methodology. (United Way of America.)



Benefits, Public and Private - Societal needs and issues refer to social, economic, and environmental (SEE) conditions that people find unacceptable or questionable. The improvements in SEE conditions that program participants receive through their participation may be called private benefits. Public benefits flow beyond participants and provide economic, social, and environmental benefits to a community or society. Private benefits may conflict with public benefits. Public and private benefits occur when individuals, groups, organizations or companies, and communities adopt improved practices related to a particular problem or need (see Bennett, 1996).

Coalition - A coalition is a group of organizations and individuals working together for a common purpose. There are two types of coalitions:
1. "One Issue" or event coalitions only have to agree on one particular issue. The coalitions dissolve when the issue has been solved or the event has been coordinated.

2. "Multi issues" coalitions have related issues, such as nutrition and health, child care needs, elderly healthcare, or the environment. This more permanent type of coalition recognizes the value of mobilizing together for action over a longer time. To be effective the "multi issues" coalition should have a date set for work to be completed. The coalition can always be reorganized if there is still a need for it (Stevens, 1990).

Collaboration - a process through which parties who see different aspects of a problem can explore constructively their differences and search for (and implement) solutions that go beyond their own limited vision of what is possible (Taylor-Powell et al., 1998). Program authority structures and resources of the separate agencies are merged.

Cooperation - a process where parties with similar interests plan together, negotiate mutual roles and share resources to achieve joint goals but maintain separate identities (Taylor-Powell et al., 1998).

Cooperative Extension is a partnership of state, federal, and county agencies administered through state land grant universities, the U.S. Department of Agriculture, and county governments. The state, federal, and county partners cooperate on programs to address the needs of people linked to agricultural production, protection and processing; natural resources and environment; families, youth, children, and nutrition and health; and rural and community social and economic development.

Coordination- a process of communication, planning, sharing or resources, risks and rewards for purposes of efficiency and effectiveness in achieving the complementary goals of the parties involved (Taylor-Powell et al., 1998).

Educational programming includes developing, implementing, and improving programs that provide information, education, or training. Evaluation is a part of all stages of programming, not just a follow-up to program implementation. Educational programming may be divided into three stages: program organization, program planning, and program performance. Evaluation helps revise organization, plans, and performance.

Inputs - resources dedicated to or consumed by the program. Examples are money staff and staff time, volunteers and volunteer time, facilities, equipment, and supplies (United Way of America).

Impact Evaluation - A form of outcome evaluation that assesses the net effect of a program by comparing program outcomes with an estimate of what would have happened in the absence of the program. This form of evaluation is employed when external factors are known to influence the program's outcomes, in order to isolate the program's contribution to achievement of its objectives (General Accounting Office, 1998). It assesses program processes to understand how outcomes are produced (Perrin, 1998).

Indicator - 1. specific items of information that track a program's success. They describe

observable, measurable characteristics or changes that represent achievement of an outcome. 2. observable phenomena that point toward the intended and/or actual condition of situations, programs, and outcomes. These observable items are used to specify program goals and objectives and to signal their degree of achievement. 3. tangible evidence that one uses to measure how far one has achieved the goal. 4. Observable data whose presence demonstrates or suggests the presence of phenomena that are less observable.

Interdependence models - a combination of research-transfer and adult education models, interdependence models consider: (1) the concurrent actions and outputs of extension, research agencies, industry, and intermediate users as well as end users of practices and technologies, and (2) these five elements' continuous mutual dependencies in the generation and adoption of technologies and practices, plus the education of users (Bennett, 1993).

Needs assessment is a social institution and procedures that integrate ideas from political theories of democracy with practices flowing from the mainstream of social science research. In the broadest sense, citizens participate in community and societal activities in many ways: as consumers, as members of voluntary civic groups, through religious organizations, and in electoral politics. However,...citizen participation [through needs assessment] denotes the involvement of people in political decision making outside the electoral process (Summers, 1987, p. 3).

Networking - an exchange of information for mutual benefit which reflects an initial level of trust and commitment among organizations; usually person-to-person rather than organization-to-organization.

Opportunity assessments identify the combination of circumstances that are favorable for program development and implementation. Agencies and organizations assess the opportunity, or the prospect, they have to make a positive impact on the targeted social, economic, or environmental condition. Because missions and goals vary among different agencies and organizations, opportunity assessments identify how collaborative efforts among the agencies and organizations can most effectively address the targeted SEE condition using the least amount of resources.

Outcome - 1. benefits or changes for individuals or populations during or after participating in program activities. They may be influenced by program outputs. Outcomes may relate to behavior, skills, knowledge, attitudes, values, conditions or other attributes. They are what participants know, think, or can do; or how they behave; or what their conditions is, that is different following a program (United Way of America). 2. behavior changes over time. A unit of outcome represents some individual, group, organization, or community with a sustained change in status or behavior that can be attributed in part to the efforts and influences of the agency, program, or project (Kibel, 2000).

Outcome Evaluation - A form of evaluation that assesses the extent to which a program's outcome-oriented objectives are achieved. It focuses on outputs and outcomes (including

unintended effects) to judge program effectiveness but may also assess program process to understand how outcomes are produced (General Accounting Office, 1998).

Outputs - program activities and their direct products. Usually outputs are measured in terms of the volume of work accomplished, for examples, the numbers of classes taught, counseling sessions conducted, educational materials distributed, and participants served. Outputs have little inherent value in themselves. They are important because they are intended to lead to a desired benefit for participants or target populations (United Way of America).

Process (or Implementation) Evaluation - A form of evaluation that assesses the extent to which a program is operating as it was intended. It typically assesses program activities' conformance to statutory and regulatory requirements, program design, and professional standards or customer expectations (General Accounting Office, 1998).

Program

1. A "program" is a sequence of significant educational experiences with a focus on a main purpose of helping people make improvements in their lives. Each teaching event leads to another as the program develops, perhaps as long as several years. The educational program is aimed at helping people achieve important outcomes or impacts (Parslow, 1995).
2. A "program" may be any activity, project, function, or policy that has an identifiable purpose or set of objectives (General Accounting Office 1998).
3. A "program" is a series of activities designed to collectively hasten development and testing, considerations, and adoption of technologies and practices toward improving social, economic, and environmental conditions. These activities adapt, systemize, and transfer information to program participants, and also provide them with nonformal (not for academic credit) education. Program participants include end users of targeted practices and technologies, as well as intermediate users that support and influence those who are end users.

Program evaluation - individual systematic studies conducted periodically or on an ad hoc basis to assess how well a program is working. They are often conducted by experts external to the program, either inside or outside the agency, as well as by program managers (General Accounting Office, 1998).
A Program plan is a written document used to guide an...educational program.
Effective....educational programming depends on sound planning. Effective program plans include:

- evidence that the program is of significant concern and worthy of intensive effort,
- clearly focused, intended educational outcomes,
- an educational strategy to reach the desired outcomes, and
- a plan to collect evidence that the program has made a difference (Parslow, 1995).

Program planning and development encompasses all the activities required to assess needs and

opportunities and acquire program resources through networking with program participants, program partners, and program stakeholders. It includes setting objectives or targets for program accomplishments. Program development includes selecting needed program content and delivery methods; retrieving subject-matter from databases or generating subject-matter through assessment/adaptive research; and synthesizing and formatting subject-matter for program participants. Research findings are the primary basis for selecting subject matter and information transfer/education activities.

Public and private benefits. Societal needs and issues refer to social, economic, and environmental (SEE) conditions that people find unacceptable or questionable. The improvements in SEE conditions that program participants receive through their participation may be called private benefits. Public benefits flow beyond participants and provide economic, social, and environmental benefits to a community or society. Private benefits may conflict with public benefits. Public and private benefits occur when individuals, groups, organizations or companies, and communities adopt improved practices related to a particular problem or need (see Bennett, 1996).

Stakeholder - a person, inside or outside the organization, who has:

- a real, active interest in the organization and its programs;
- an investment in the organization/program (time, mental/emotional energy, money); and
- a commitment to the organization's/program's success.

Targets, or quantitative objectives, are measurable conditions to be reached in a defined period of time. Targets are generally a compromise or trade off between what is envisioned and what is feasible for an educational program to accomplish.

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Internet Resources

EVALUATION PLANNING & ASSESSMENT STRATEGIES

Online Evaluation Resource Library (OERL)
Bureau of Justice Assistance Web Site
CYFERNet Evaluation Web Site
Evaluation and Accountability Resources for Cooperative Extension
University of Illinois Extension: Program Planning & Assessment
Using Community Meetings
Using Nominal Groups
The Focus Group Interview and Other Kinds of Group Activities
Key Informant Interviews
Reflective Appraisal of Programs (RAP)
Post-then-Pre (Retrospective Pretest)
National Network for Family Resiliency: Interactive Program Evaluation Development Site
University of Wisconsin-Extension: Publications on Program Development and Evaluation (PDF Format)

- Planning a Program Evaluation
- Planning a Program Evaluation Worksheet
- Questionnaire Design: Asking questions with a purpose
- Sampling
- Collecting Evaluation Data: An Overview of Sources and Methods
- Collecting Evaluation Data: Direct Observation
- Analyzing Quantitative Data
- Developing a Concept of Extension Program Evaluation
- Evaluating Collaboratives: Reaching the Potential
- Community Group Member Survey: Using the Results
- Collecting Evaluation Data: Surveys
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