

G3658-4

**Program Development  
and Evaluation**



*Collecting Evaluation Data:  
An Overview of Sources  
and Methods*

**Ellen Taylor-Powell  
Sara Steele**



**June 1996**

**Acknowledgements**

The authors wish to express their sincere thanks to Gareth Betts, Mohammed Douglah, Nancy Franz, Jim Schmid and Mary Brintnall-Peterson for their timely and critical review of this document.

**B**efore you start any data collection process, ask yourself these questions:

- What is the purpose of the evaluation?
- Who will use the information—and how?
- What do I (they, we) want to know?

Collecting data is a major part of any evaluation, but keep in mind that *method follows purpose*. First, focus the evaluation by answering the questions above—think about the evaluation’s purpose, the stakeholders, and the information that is needed. Then, you can decide upon the most appropriate method(s) for collecting that information.

## Sources of evaluation information



A variety of information sources exist from which to gather your evaluative data. In a major program evaluation, you may need more than one source.

The information source you select will depend upon what is available and what answers your evaluation questions most effectively. The most common sources of evaluative information fall into three categories:

1. Existing information
2. People
3. Pictorial records and observations

### Existing information

**B**efore you start to collect data, check to see what information is already available. For instance, if your evaluation purpose is to

- **establish the need for a program**, you might be able to use local census data, demographic data from WISPOP, media feature stories, maps or service and business statistics.
- **describe how the program was carried out and who it reached**, you might use program documents, log books, minutes of meetings, enrollment records, accomplishment reports, or media releases.
- **assess results**, you might be able to use public records such as acres planted to a particular crop, local employment statistics, agency data, scorecards and judges’ comments, or evaluations of similar programs.

In this information age, look around and see what data are available that are of adequate quality to help in your evaluation. It is likely that such information may not be all that is needed but can be one, low cost source of evidence. Consider using:

- Program documents: newsletters, work-plans, accomplishment reports, statistical reports, receipts, logs, minutes of meetings, enrollment records, personnel records, proposals, project and grant records
- Existing data bases, including school census data. From WISPOP you can obtain demographic data, retail trade census data, service industry data, monthly and annual civilian employment statistics for state, county, towns and municipalities. From the Census Bureau: population, housing, industry; etc.
- Research reports, county trend data supplied with program planning materials
- Histories: county, program, life histories
- Media records
- Public service and business records; for example, farm records, fertilizer sales at local dealers, employment statistics, justice, social and health agency data, Department of Natural Resources and Soil Conservation Service data, local government plans, student performance records
- Other evaluations of the same or similar programs

## People

**P**eople are the most common source of information for an evaluation. They provide information about the need for the program, its implementation and its outcomes. They do this by their actions, by volunteering comments and testimony, by taking knowledge and skill tests, and responding to questions.

In Extension, we often turn to program participants as the main source of evaluative information. Many times participants are the best source of information, but there may also be others better equipped to provide the information we seek. For example, teachers or parents might be able to report changes in youth problem solving skills better than the young people themselves. Or veterinarians may be in a better position to speak about changes in herd health than farmers. Think about who can best answer your questions.

- Participants, beneficiaries—those who benefit directly or indirectly from the program
- Nonparticipants, proponents, critics, victims
- Key informants: anyone who has particular knowledge about the program or how it benefits participants. Examples: teachers, parents, religious leaders, previous participants
- People with special expertise. Examples: judges, college faculty, historians
- County residents, local leaders, and those who are influential in a community
- Program staff, administrators, volunteers
- Collaborators; competitors
- Funders
- Policy makers, legislators, federal, state or county agency / organizational staff

## Pictorial records and observations

The third major source of evaluative information is through visual accounts—pictures, photographs and video tapes—or direct observation of situations, behaviors, program activities and outcomes.

Photos, videotapes, slides and other visual images (drawings, pictures, cartoons, graphics and diagrams) are under-utilized but powerful sources of information. Consider any number of visual records that either you or others produce to document program activities; for example, media pictures and graphics, classroom drawings, economic development charts. Visual images often convey what the written word misses, and can serve as forceful additions to an evaluation report or presentation.

Observation has the advantage that it does not depend upon people's willingness and ability to furnish information. Observations can provide information about real-life situations and circumstances that are useful in designing or understanding what is happening in an Extension program—and why it is happening. Physical surroundings, verbal and nonverbal behavior, relationships, the tone of a program, and learning and behavioral changes are all good subjects for observation.

Examples of visual images as sources of information include:

- Before-and-after pictures such as photos of sites before and after recycling efforts; a garage before and after it became a youth center; or an empty lot before and after a garden project
- Art work by children which illustrates their perceptions of, or responses to their environment—their notions about violence, drugs and other issues

- Videotape of a group meeting which illustrates how to conduct the order of business, and examples of leadership or collective decision making skills
- Slides showing changes that have occurred over time, such as lakefront development, downtown restoration, grazing management systems, or program participants learning new skills such as training a pet or speaking in front of an audience
- Videotaped excerpts from nutrition education programs which demonstrate participant reactions and learning taking place
- Video or photos of program activities showing the diversity of participants
- Observations of events and activities to record the numbers, characteristics, practices, interaction patterns and skill development of program participants
- Observations of practices such as erosion control and manure management or lawn care practices
- Observations of verbal and nonverbal behavior; for example, people reacting to a nutrition display, working together as a team, or attending a cross-cultural event

There are a variety of useful and potent sources of information to consider when you conduct a program evaluation. Don't always turn to program participants as the only source. Think about what you want to know; then, determine who or what can best deliver that information. Be creative and remember that several sources usually provide a more complete and credible evaluation than just one.

## Methods for collecting information about an evaluation

 For many years, scientific methods have dominated the field of evaluation. These methods seek to establish cause-effect relationships, produce generalizable results and provide quantitative data through structured data collection procedures. Alternative methods have gained recognition over the past decade in the effort to understand complex social conditions. Methods such as observation and open-ended interviews seek to explore situations in depth. As a result, we now have an array of techniques to choose from, all regarded as credible within the profession.

Given the varied approaches to evaluation, there is no single list or categorization of data collection methods. A list follows of the most common methods used in Extension program evaluation, some of which also stand as social science research methodologies (survey, case study). Some are geared toward collecting quantitative (numeric) data; others toward qualitative (narrative) data. Some may be more appropriate for certain audiences or resource considerations.

- **Survey:** collecting standardized information through structured questionnaires to generate quantitative data. Surveys may be mailed (surface and electronic), completed on-site or administered through interviews, conducted either face-to-face, by telephone or electronically. Sample surveys use probability sampling which allows you to generalize your findings to a larger population, while informal surveys do not.
- **Case study:** an in-depth examination of a particular case—a program, group of participants, single individual, site, or location. Case studies rely on multiple sources of information and methods to provide as complete a picture as possible.
- **Interviews:** information collected by talking with and listening to people. Interviews range on a continuum from those which are tightly structured (as in a survey) to those that are free-flowing and conversational.
- **Observation:** collecting information by “seeing” and “listening.” Observations may be structured or unstructured.
- **Group assessment:** collecting evaluation information through the use of group processes such as a nominal group technique, focus group, Delphi, brainstorming, and community forums.
- **Expert or peer review:** examination by a review committee, a panel of experts or peers.
- **Portfolio review:** a collection of materials, including samples of work, that encompass the breadth and scope of the program or activity being evaluated.
- **Testimonial:** a statement made by a person indicating personal responses and reactions.
- **Test:** use of established standards to assess knowledge, skill, or performance such as a pen-and-pencil or skills test.
- **Photograph, slide, video:** uses photography to capture visual images.
- **Diary and journal:** recording of events over time revealing the personal perspective of the writer/recorder.
- **Log:** recording of chronological entries which are usually brief and factual.
- **Document analysis:** use of content analysis and other techniques to analyze and summarize printed material and existing information.

## ■ Other

- **Action cards:** use of index cards on which participants record what they did—the “action”— and when they reached their goal; primarily used in self-assessment.
- **Simulation:** use of models or mock-ups to solicit perceptions and reactions.
- **Problem story:** narrative account of past, present, or future situations as a means of identifying perceptions. Using fictional characters externalizes the problem situation.
- **Creative expression:** use of art forms to represent people’s ideas and feelings through stories, drama, dance, music, art.
- **Unobtrusive measures:** gathering information without the knowledge of the people in the setting; for example, examination of record books to identify areas of greatest activity; unobtrusive observations of playground interactions to record aggressive behaviors.

Extension faculty are particularly clever in using a variety of nontraditional techniques for getting people to talk or express themselves for evaluation purposes. Unleash your creativity and try some new techniques (see sidebar). Remember, however, the evaluation’s purpose, the intended users, and what will be viewed as credible information. Then decide whether convention or innovation is in order. Some of the less conventional methods may be more appropriate for professional and program improvement than for external accountability needs or tenure requirements.

## Action techniques

**Jellybeans.** This idea works well with young people. Count out a fixed number of jellybeans and place the same number in each of three cups (use any number of cups). Label each cup with “learned a lot,” “learned a little,” “didn’t learn anything” (or whatever response options fit). Ask each youth to take a jellybean from the cup that best describes his or her experience. Tally after each question. Kids get a sweet reward and you get evaluation data. (Washington State)

**Line ratings.** Place a rope or masking tape on the floor. Options to a set of questions are printed and placed at either end of the line. Participants place themselves along the line depending upon their reactions to the question asked. For example, “How helpful is the parenting group in ....?” with “very helpful” at one end and “not helpful” at the other. Participants place themselves along the line to indicate their rating of each item. Record the number of participants standing in each quadrant along the line. (Sara Steele)

**Webbing.** To find out what worked and what didn’t at the end of a meeting or workshop, have participants form a circle. Ask them to think about what they gained from the workshop and what they still need help with (use any questions that fit your purpose). Toss a ball of yarn to someone who then tosses it to someone else to create a web. When the person receives the ball, s/he answers the questions. Have someone record the responses or tape record for later analysis. (Nancy Franz)

**Card sort.** Print brief explanations of program outcomes (or whatever you are seeking information about and wish people to rate or rank) on 3 x 5 cards. Ask participants to sort the cards into piles to indicate their ratings. This can be done individually or in small groups. An additional element is to have a recorder note the comments made as each card is being placed in a pile. Simple key words or graphic images can be used to ease literacy requirements. (Adaptation of wealth rankings.)

## Instrumentation

The actual data collection will be facilitated by the evaluation **instrument** (the recording form or device) whether it is a questionnaire, a checklist, observation form, interview guide, rating scale, video or audio tape. Think about the information you need, the method you have chosen and decide what is needed to record the information.

## Choosing a method

Once again, there are no right and wrong methods. Your goal is to obtain **trustworthy, authentic** and **credible** evidence that will be used. Being credible means that people (you, funders, county board) have confidence in your process and believe your results.

When choosing a method, think about:

1. The purpose of the evaluation. Which method seems most appropriate for your purpose and the evaluation questions you want to answer?
2. The users of the evaluation. Will the method allow you to gather information that can be analyzed and presented in a way that will be seen as credible by your intended audience? Will they want standardized quantitative information and/or descriptive, narrative information?
3. The respondents from whom you will collect the data: Where and how can they best be reached? What is culturally appropriate? What is appropriate for the age, literacy level, and socio-economic background of the respondents? Are they likely to respond to a mail survey, or prefer to answer questions face-to-face? Or would using a group process, observation or key informants work better?
4. The resources available (time, money, volunteers, travel expenses, supplies): Which method(s) can you afford and manage well? What is feasible? Consider your own abilities and time.

5. The degree of intrusiveness—interruptions to the program or participants. Will the method disrupt the program or be seen as intrusive by the respondents?
6. Type of information: Do you want representative information that stands for all participants (standardized information such as that from a survey, structured interview or observation checklist)? Or do you want to examine the range and diversity of experiences, or tell an in-depth story of particular people or programs (descriptive data as from a case study)?
7. The advantages and disadvantages of each method: What are the inherent strengths and weaknesses in each? What is most appropriate for your situation?

## Mix methods

Try different methods and, when possible, combine them. Different methods reveal different aspects of the program. For example:

- You might conduct a group assessment at the end of the program to hear the group's viewpoint, as well as some individual interviews to get a range of opinions.
- You might conduct a survey of all producers in the county as well as identify a few, as case examples, to question in greater detail.
- You might ask participants to fill out an end-of-program questionnaire and follow that up in several months with a mail or telephone survey.
- You may ask participants or volunteer leaders to keep diaries during the course of the program, use structured observations to record your own observations and make a videotape of the final demonstrations.
- You may conduct a focus group interview with key stakeholders as well as structured individual interviews with the same participants.

Combining methods provides a way to triangulate—to validate your findings and build a more thorough evaluation. Triangulation is based on the premise that each method has its own biases and deficiencies. Using multiple methods provides for cross-checks and increased validity. It is also more costly so consider whether your evaluation and program are worth it.

### Whose perspective?

Most data collection methods can be seen through one of two perspectives: (1) the initiator's; or (2) the respondent's. Until recently, most evaluations were developed from the initiator's point of view. In that approach, data are collected to provide information that has been identified as important by the program person or agency; for example, through structured questionnaires and surveys. Today, many evaluations seek to look at a program and its results through the eyes of the participant. Data collection is designed to avoid preconceived views and include stakeholders' concerns and interests. Techniques such as loosely structured interviews and personal diaries create an open-ended and discovery-oriented environment.

Many of the methods can be conducted from either of the two perspectives. For example, a structured interview is designed to provide information identified as important by the program staff—you write your questions ahead of time and ask only those questions. An unstructured interview is designed to let respondents talk about what is important to them—you identify the topics you'd like to cover, but within that framework, respondents talk about what is important to them. The same holds true for observations. The difference lies in how much structure is imposed on data collection by the data collector.

Again, one approach is not better than another. It depends upon the purpose of the evaluation and intended use. In some instances, the two perspectives yield the same findings. In other cases, the program/agency perspective may be quite different than the participant's.

### Ethics

Any evaluation has human, ethical and political ramifications. Overshadowing the methodological and technical issues of identifying the most appropriate information source and collecting credible and useful information is concern about the rights of human subjects. Are we adequately respectful? Do we ensure confidentiality<sup>1</sup> when necessary? Are respondents aware that they are participating in an evaluation and that the results will be distributed?

As you undertake an evaluation, think about the individual's rights to privacy, assuring participants of confidentiality and showing respect.

---

<sup>1</sup> Confidentiality is the active attempt to keep the respondent from being identified with the supplied information. This differs from anonymity which means that the respondent is unknown. Anonymity seldom exists except in self-administered surveys but we can try to ensure respondents of confidentiality.

## References

- Berg, Bruce. 1995. *Qualitative Research Methods for the Social Sciences*. 2nd ed. Boston: Allyn and Bacon.
- Kumar, Krishna. 1987. *Rapid, Low-Cost Data Collection Methods for A.I.D. Program Design and Evaluation Methodology Report No. 10*. Washington, D.C.
- Patton, Michael Quinn. 1982. *Practical Evaluation*. Beverly Hills: Sage.
- Pietro, Daniel Santo (ed). 1983. *Evaluation Sourcebook: For Private and Voluntary Organizations*. N.Y.: American Council of Voluntary Agencies for Foreign Service.
- Sawyer, Barbara J. 1984. *Evaluating for Accountability*. Corvallis: Oregon State University Extension Service.
- University of Maine Cooperative Extension. 1987. *A Guide to Program Evaluation and Reporting*. Orono, Maine.
- Worthen, Blaine and James Sanders. 1987. *Educational Evaluation: Alternative Approaches and Practical Guidelines*. N.Y.: Longman.

---

**Authors:** Ellen Taylor-Powell is a program development and evaluation specialist for Cooperative Extension, University of Wisconsin–Extension. Sara Steele is a professor of continuing and vocational education at the University of Wisconsin–Madison.

An EEO/ Affirmative Action employer, University of Wisconsin–Extension provides equal opportunities in employment and programming, including Title IX and ADA requirements. Requests for reasonable accommodation for disabilities or limitations should be made prior to the date of the program or activity for which they are needed. Publications are available in alternative formats upon request. Please make such requests as early as possible by contacting your county Extension office so proper arrangements can be made.

© 1996 by the Board of Regents of the University of Wisconsin System doing business as the division of Cooperative Extension of the University of Wisconsin–Extension. Send inquiries about copyright permission to: Director, Cooperative Extension Publications, 201 Hiram Smith Hall, 1545 Observatory Dr., Madison, WI 53706.

This publication is available from:

Cooperative Extension Publications  
Room 170, 630 W. Mifflin Street  
Madison, WI 53703.  
Phone: (608)262-3346

**G3658-4 Program Development and Evaluation, *Collecting Evaluation Data:*  
*An Overview of Sources and Methods***