

Program Development and Evaluation



Collecting Evaluation Data: Direct Observation

Ellen Taylor-Powell and Sara Steele

We often become so involved in developing questionnaires to secure information from people that we overlook the fact that considerable data can be collected by just observing. Direct observation¹ is an underused and valuable method for collecting evaluation information.

“Seeing” and “listening” are key to observation. Observation provides the opportunity to document activities, behavior and physical aspects without having to depend upon peoples’ willingness and ability to respond to questions.

When observation is useful

Observation is an essential element in good teaching and program development. In evaluation, it can be used to secure benchmark and descriptive data during program initiation and to document program activities, processes and outcomes. Observation is appropriate in the following conditions:

■ When you want direct information.

For example:

- Paying random visits to farms, homes, gardens (or any sites) may be a more reliable indicator of whether people are using practices recommended by Extension than by simply asking people.
- Observing the management operations and procedures of small firms may provide better information than relying on reports or key informants.
- Unobtrusively recording the ethnic diversity of a group provides direct information on participants’ characteristics.

■ When you are trying to understand an ongoing behavior, process, unfolding situation or event.

For example:

- Observing and describing what is done in each phase of a community development project.
- Observing parents dealing with interruptions from their toddlers.
- Observing officers conducting a business meeting before and after an officer training program.

■ When there is physical evidence, products or outcomes that can be readily seen.

For example:

- Observing materials set out for recycling along the roadsides.
- Periodically observing along the coastline of a lake involved in the “Adopt a Lake” program.
- Having a team of experts inspect the quality of grasses and legumes in a pasture.
- Inspecting gardens, newsletters, project books, etc.

■ When written or other data collection procedures seem inappropriate.

For example:

- You have several participants volunteer to observe and report on your program delivery rather than having all participants fill out a questionnaire.
- A perceptive observer records dynamics and concerns during a workshop for new immigrants.
- Trainers observe each others’ financial management classes with low-income women, noting dynamics, questions raised, and level of participation.

¹Direct observation as used here should not be confused with participant observation as used in ethnography and anthropological research. The latter involves much greater time, training and immersion in the setting than direct observation as discussed here.

The question is—**What do you want to know?** Then, is observation the most appropriate and cost-effective method to collect that information?

Another question is—**What will the users/stakeholders view as credible and useful information?** This may not be a concern if you use the results internally for program improvement or professional development. But, if the data are to be used with or by others outside the organization, you might assess how they will react to observations as evidence of program processes and results and who will be seen as credible observers. Being thoughtful and systematic will help establish observation as a credible evaluation method.

Do people need to know that they are being observed?

Observation can be overt (obtrusive—everyone knows that they are being observed) or covert (unobtrusive—people do not know). The extent to which people need to be informed depends upon the situation and your evaluation purpose. People may or may not be asked for their full and informed consent. Given that people often behave differently when they know they are being observed, covert observation is appealing. However, it is essential that neither the observation nor the resulting report harms the people observed. This is seldom a concern in Extension program evaluation. While there is no consensus in social science research about how explicit to be about observations, the ethics and morality of evaluation must always be considered.

What to observe

The possibilities for observation are almost limitless—people, behaviors, reactions, physical settings, environmental features, record keeping systems, project reports, and more. Even within an educational event, a variety of elements can be observed to evaluate the delivery and potential outcomes of the event. For example, consider the topics in the sidebar when you observe an Extension program.

Often, it will be impossible to observe all people, sites, or program documents. In these cases, you will need to **sample**. The same principles of sampling apply to observations as to other forms of data collection. If you want to generalize your findings to the total population from which you took your sample, you will need a probability sample (which provides for random selection). If generalizability is not important or if your purpose is to observe certain cases for a specific reason, then nonprobability or purposeful sampling is appropriate. Refer to the publication on sampling for further help.

Program components to observe

Characteristics of participants (individually and as a group)

- Gender, age, profession/vocation, dress, appearance, ethnicity
- Attitude toward subject, toward others, about self
- Skill and knowledge levels
- Statements about commitments, values, changes to be made

Interactions

- Level of participation, interest
- Power relationships, decision-making, current issues
- General climate for learning, problem-solving
- Levels of support, cooperation

Nonverbal behavior (learners, presenters)

- Facial expressions, gestures, postures
- Interest and commitment—initial impacts

Program leader(s), presenters

- Clarity of communication, access to questions
- Group leadership skills, encouraging full participation
- Awareness of group climate
- Flexibility, adaptability
- Knowledge of subject, use of aids, other teaching/learning techniques
- Sequence of activities

Physical surroundings

- The room—space, comfort, suitability
- Amenities—beverages, etc.
- Seating arrangements

Products of a program

- Demonstrations, facility, plans...
- Brochures, manuals, newsletters...

Source: Cloutier et al., 1987, section III, p. 50

A common occurrence is to observe the most successful sites or to observe the most convenient people. This is understandable, but state clearly what your observations represent. Don't suggest that they represent the total population.

Looking for or looking at: Structured and unstructured observations

Looking for. In evaluation, we are often looking for certain things—how many kids are wearing their riding helmets, what leadership skills are being demonstrated, how farmers are practicing grazing management. Such structured observations are directed by a preset guide or checklist of what to observe. For example, to pass a CPR examination a trained instructor watches how you give CPR. The instructor’s observation guide probably lists each step of the process with a place to indicate if it does or does not occur, and/or a rating scale to indicate how well it is carried out. There is also probably a place to make notes.

Structured observations are used when we want to standardize information and do a numerical summary of how many people are doing certain things. They provide quantitative data from frequency counts, rankings and ratings.

Looking at. In other instances, you may wish to observe people, activities, or physical aspects as they naturally exist, recording whatever you see that relates to your evaluation question(s). You do not confine yourself to looking for preset items. This approach comes from anthropology. It seeks to be inclusive and to see things within the participant’s context. For example, when evaluating a program to improve fathers’ parenting skills, you may observe fathers with their preschoolers. You will observe the full situation—everything that is going on in the setting—and not limit your observations to preidentified areas.

With an open-ended, unstructured format, you can pick up things which you might not have thought about in advance. Less structured observations produce qualitative data.

In some situations, **observing what does not happen** may be as important as observing what happens. Often, it is useful to combine elements of the structured and unstructured formats in the observation, including the preidentified items that you want to pay attention to as well as space for recording the unexpected or unique happenings.

Recording your observations

To be useful and credible for program evaluation, observations need to be recorded. Sometimes this is done on the spot; at other times, you may record your observations after you’ve left the situation. It is important to record the date and location of the observation. A short description of the context in which the observation occurred is helpful. Remember, observations pertain to what you see as well as what you hear. Recording observations is done through one or more of the following means. You will find examples of these methods in the appendix.

- **Observation guides.** These are printed forms that provide space for recording observations. They are particularly useful when several observers are involved or when you wish to obtain comparable information from several sites/observation points or observations of many people. The more structured the guide, the easier it will be to tally the results, but the less opportunity there will be to record variations or unexpected occurrences.
- **Recording sheets or checklists.** These forms are used to record observations as in a YES-NO option (present-not present) or on a rating scale to indicate extent or quality of something. Checklists are used when there are specific, observable items, actions or attributes to be observed. In Extension, we are familiar with such checklists when we are judging contests or fairs and looking at the products that people have produced or the performances they are giving.
- **Field notes.** This is the least structured way to record observations. Originating from the field of anthropology, using field notes in Extension evaluation means recording observations in a narrative, descriptive style as you notice or hear something of import. There is no predetermined item or behavior to observe and, thus, no printed recording form. Often a notebook is used to record these observations. Leave a wide margin on one side of the notebook paper to facilitate later analysis of the text. Remember to carefully record the date, location and any relevant contextual information for all field note entries.

You may select certain sites/programs/situations to visit or record observations spontaneously when you observe programs, participants, or physical products and outcomes. You may write down observations at the time, take brief notes and write a more descriptive narrative later. Or you may commit your observations to memory and make notes later. In some instances, you may want to dictate your observations as soon as possible into a tape recorder for later analysis. Small pocket tape recorders are particularly handy for recording field notes.

- **Pictures.** Photographs and video tapes can be used to record observations. The camera is an extension of your eye. The camera makes a record that can be analyzed later and may be used to illustrate your evaluation report.
- **Combinations.** There are no pure observation recording methods. Any of the above recording options may be combined or altered to meet your particular evaluation needs. Often observation forms include a combination of checklists, scales, number lines, etc. as well as an open space to record “other observations.”

Preparing yourself

How many times have you looked at a scene with another person and ended up saying, “I didn’t see that!” or sat in an audience but not really listened. If you are going to use observation as a means of collecting information, you need to watch and listen attentively. One element is to be able to capture detail. Another is discerning what is important. Once the observations are made, you will need to interpret the meaning of what you’ve observed. And sometimes you will need to validate major impressions. If possible or feasible, using a team to carry out the observations provides a more complete picture and avoids individual biases.

Capturing detail. Artists develop skill in observation by studying and trying to replicate what they see. You might want to start increasing the accuracy of your observation by studying a complex picture for a few seconds. Then move on to describing everything you can see out of your window. Finally, try describing the detail in a dynamic scene that is not repeated.

Discerning. There is likely to be much more in what you are observing than you can or need to take in. What is important? You need to be discerning in looking at all of the detail in an observation and select that which is important to your purpose.

Interpreting. Just as survey and interview data can be interpreted differently, what you see and hear can be interpreted in various ways by different people or even by yourself at different times. Therefore, a good observer takes care in interpretation. You may wish to include others in the interpretation or use research to help make sense of the observational data.

Validating. When decisions about what is observed have major consequences, it may be important to validate one’s observations. That may mean going back and repeating the observation. It may mean watching several people before forming a conclusion. It may mean involving others to validate the observation. Recording observations on video tape may be necessary when instantaneous observations are difficult. Tapes can be played several times and examined by more than one person to validate the conclusion.

Who are the observers?

You. You are the most likely person to be the observer. Arm yourself with an observation guide, a checklist or a notebook for jotting down observations and comments. Keep field notes during the course of a program and use those notes as evidence.

Participants. Program participants, whether randomly chosen and asked to do some special observing or a purposefully selected steering panel, are in a good position to observe a program. Either singly or as a group, you might develop a list of things to look for or you may decide to record anything deemed important. Through a debriefing, the observers can share their information and implications of what they observed. Or each observer might write up a brief report with or without recommendations. Participants are asked not only to participate as they ordinarily would in the session, but to be more aware of the reactions and interactions of their fellow participants.

Participants can also be asked to observe someone else’s program. For example, a 4-H project leader might be asked to attend a project meeting in another club, and, upon leaving the meeting, to fill in a check sheet or write or tape a description following a guide. A secondary benefit is that the project leader may well see things to change in her or his own meeting by spotting them somewhere else.

Stakeholders. If a key stakeholder can take the time, involving him or her as an “official” observer can serve as a public relations effort, can increase the official’s awareness of the depth and value of the program, and can provide you with evaluative data. You will probably want to orient the official to the “observer” role and perhaps, provide him/her with a guide or checklist of things to observe. Arrange for a debriefing or discussion afterwards.

Colleagues. Fellow agents, specialists and/or collaborators could be useful observers of your programs. You might work out a reciprocal relationship. Other members of the program team could provide this input and feedback, intruding little, if at all, on the atmosphere of the educational program.

Volunteers. Volunteers can be engaged to carry out observations, or you might interest existing program volunteers in the task. For example, Master Gardeners sometimes carry out inspections/observations of gardening practices, including inspections of shelves for dangerous chemical products. A team of Master Volunteers could be recruited to visit club meetings and evaluate club strengths and weaknesses. Or, video tape sessions you present and have volunteers help you analyze your performance.

As suggested earlier, a team approach to collecting observation data provides a more complete picture and helps avoid individual biases in data collection and interpretation.

Training observers

When involving other people as observers, some training may be necessary. The level and amount will depend upon the complexity of the observations and individual capabilities. There might be some orientation to the purpose of the evaluation, how the observations are to be used and what is involved in collecting observational data: what to look for and how to record the observations.

Training will be necessary if you want to standardize the observations to aggregate comparable data across sites. All observers need to see and record as similarly as possible. It will be important that all the observers look for the same things, use similar meanings for what they see and record their observations in like manner. If rating scales are used, a clear understanding of the ratings (what each rating means and how to tell one rating from another) is required. Practice will help to ensure that observers are rating the same observation in like fashion.

The Urban Institute, in particular, has used trained observers to evaluate community services such as street and alley cleanliness, road and traffic control maintenance, housing conditions, community appearance and building maintenance. Basic to this system is a set of written and photographic guidelines that enable the observers to consistently assign a grade or numerical rating to what is observed. It requires clear written definitions and/or benchmark photographs to ensure consistent ratings. After appropriate training, different persons acting at different times and using the same photographic and/or written guidelines and rating procedures are able to produce comparable ratings (see Wholey et al., 1994 for further detail).

A variety of possibilities exist for using observation as a credible data collection method in Extension program evaluation. Being thoughtful and systematic is fundamental. With a little planning, we can build observation techniques into our programs, collecting and interpreting information as we go along rather than leaving evaluation until the end.

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Numerous books and articles on observation in social science research and participant observation in anthropology.

**Individual Shopper Observation
Recording Sheet**

1. Sex: M___ F___
2. Estimated age: _____
3. Race: Caucasian ___ Black___ Hispanic___ Other
or unsure___
4. Hurried___ Unhurried___
5. Major shopping___ Minor shopping___
6. Using shopping list: yes___ no___ uncertain___
7. Product area shopped

 - a. Reads container label
yes___ no___ uncertain___ na___
 - b. Examines for freshness date
yes___ no___ uncertain___ na___
 - c. Selects generic brand
yes___ no___ uncertain___ na___
 - d. Obviously compares brands
yes___ no___ uncertain___ na___
 - e. Selects "best buy" among brands available
yes___ no___ uncertain___ na___
 - f. Uses coupons
yes___ no___ uncertain___ na___

8. Other observations about shopping practices:

Source: Worden, 1987. Example from Florida

Soybean Impact Study Recording Sheet

Date _____

Location and site	Name/ number of road	Mile marker
___ NW quadrant of county	_____	_____
___ NE quadrant of county	_____	_____
___ SW quadrant of county	_____	_____
___ SE quadrant of county	_____	_____

Approximate size of bean field: _____ acres

Tillage method used:
No-till___ In stubble___ In grass___
Conventional___

Other things observed: (equipment being used, row spacings, approximate planting date, weed contamination, seed bed preparation, general appearance of beans, etc.)

Source: Worden, 1987. Example from Florida

Field Notes (excerpt)

Date March 5, 1996; 8–9:30 p.m.

Location Church meeting room; third meeting of strengthening youth collaborative

Judy, Stan and Colleen talking when I arrive. Judy said she thinks we're spinning our wheels; Stan agreed. George arrives 10 mins late—apologizes. He's been traveling so didn't accomplish what he promised at last meeting.

Spent most of time talking about what to do next. Judy wants to do something; George wants to include more people in our group. Each to bring recommendations to next meeting. I suggested that we spend some time at the next meeting talking about vision and what we each hope to accomplish—I'll facilitate.

Date March 25, 1996; 8–10 p.m.

Location Church meeting room; fourth meeting of strengthening youth collaboratives

I facilitated discussion about visions and individual expectations; seemed to work well. Used visioning process and scenario building. Colleen agreed to draft mission statement—all to review. Emerged that we need representation from the business community in our group and more public visibility.

Youth Development Skills: Communications Skill Recording Sheet

Instructions to the observer: Observe youth at program start-up and again at the end of the program.

Key concept	Needs to improve 1	Beginning 2	Developing 3	Advanced/ Leader 4	1st evaluation	2nd evaluation	Change score
Self-expression	Resists sharing of thoughts, feelings; shy	Wants to express thoughts, feelings directly, but struggles to do so	Expresses thoughts, feelings in some safe situations	Expresses thoughts, feelings even in difficult situations	_____	_____	_____
Listening	Routinely ignores input from others	Listens to friends but ignores input from others	Listens carefully to input from everyone	Questions others to get other viewpoints	_____	_____	_____
Impulse control	Routinely mis-handles conflict (verbal/ physical abuse or avoidance)	Identified impulses that tend to promote trouble	Routinely manages conflict by themselves	Turns negative impulse into positive actions	_____	_____	_____

Source: Bonnie Herrmann, Milwaukee County, 1996

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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.

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