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AUTHOR Sherwood-Fabre, Liese
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ABSTRACT

This paper examines the concepts of program monitoring and program evaluation in the literature, and offers working definitions based on two dimensions of measurement: focus (what questions are addressed) and timing (how often the measures are taken). Focus can be on inputs to the program or outcomes from it; timing can be one-shot or continuous. Continuous measures are here considered to be monitoring--"input monitoring" if the measures are on inputs, "impact monitoring" if they are on outcomes. One-shot measures are considered to be evaluation--"process evaluation" if it measures inputs, "impact evaluation" if it measures outcome. The paper further defines program monitoring as part of the evaluation process, and notes that program evaluators must work with project managers in making informed decisions, avoiding information overload, and implementing and monitoring effective programs. The different definitions of program monitoring by Rossi, Freeman, and Wright by the Evaluation Research Society, by the World Bank; by J. Wholey, and by the International Statistical Program Center are considered and compared. (JGL)

AN EXAMINATION OF THE CONCEPT AND ROLE OF PROGRAM MONITORING AND EVALUATION

Liese Sherwood-Fabre
U.S. Bureau of the Census

ABSTRACT

The distinction between program monitoring and evaluation is not always a clear one. While the evaluation profession has included monitoring as one type of evaluation, the definitions of each vary greatly within the profession. This paper examines the concept of monitoring and evaluation that appears in the literature and offers a working definition based on the focus and frequency of measurement. This definition allows further examination into the requirements for the evaluator when developing a program monitoring system and what constitutes a well-designed monitoring system. The relationship of program monitoring as part of an integrated program monitoring and evaluation system is also discussed.

AN EXAMINATION OF THE CONCEPT AND ROLE OF PROGRAM MONITORING AND EVALUATION

by

Liese Sherwood-Fabre
Evaluative Studies Branch
International Statistical Program Center
U.S. Bureau of the Census
Washington, D.C. 20233

Prepared for presentation at "Evaluation '86" --the American Evaluation Association meetings, Kansas City, October 30 - November 1, 1986.

AN EXAMINATION OF THE CONCEPT AND ROLE OF PROGRAM MONITORING AND EVALUATION

This paper represents frustrations and insights I encountered during my preparation for a workshop on monitoring and evaluation given by the International Statistical Programs Center (ISPC), Census Bureau. The frustrations occurred when I began to look for reading materials related to program monitoring and tried to develop a good, comprehensive definition of monitoring from what I found. The insights reflect my discussion with colleagues, my reading, and my attempts to synthesize what I learned.

The frustrations began when I discovered the scarcity of texts on program monitoring. The Evaluation Research Society Standards for Program Evaluation (ERS Council, 1982) describe program monitoring as "the least acknowledged but probably the most practiced category of evaluation . . . ."--which may explain why so few writings devoted to program monitoring exist. While the most recognized texts may spend a chapter or two discussing program monitoring (see, for example, Rossi et al, 1979), I found no well-known texts that paid it any extensive attention. Even government publications titled "program monitoring" treated the topic as it related to fiscal accounting and compliance with government regulations. The World Bank has published a book on monitoring and evaluation (Casley and Lury, 1982), but it is one of the few which even mentions the subject in its title. In this paper, I would like to explore the definitions and concepts of monitoring which I encountered and how they relate to evaluation and the job of the evaluator. In the process, I will bring as

many of the definitions together as possible and set the context for the papers which follow.

The Increase in the Interest in Program Monitoring

Prior to my arrival at ISPC, my job had not involved working with or developing monitoring systems. I found, however, that within the international setting, great efforts exist in developing and using monitoring and information systems, and two major forces have encouraged their use. The first involves the disenchantment with long-term impact evaluations so popular in the 1960s and '70s. While decision makers still recognize these as having a place within the field of evaluation, the late 1970s and '80s saw a search for techniques which respond more effectively to managers' and other decision makers' needs for timely, usable information. Recently, organizations such as the World Bank and the Agency for International Development (AID) have shown increased attention to shorter-term evaluations and program monitoring. Because of our close association with these agencies, our own work has shifted as well.

The introduction of small, low-cost computer systems also encouraged the rising interest in monitoring systems. These systems complete data processing and analysis much more quickly and in greater quantity than ever before. Even developing countries can now afford more computer systems with which to store and analyze data. This advance has resulted in a tremendous increase in the amount of information stored which can be processed and handed on to managers. For managers, this can

often mean that such systems involve the collection of a great deal of useless information which makes their job more difficult--instead of easier (Patton, 1982: 227). Thus, computerized monitoring systems only contribute to program management if properly planned and developed.

The professional evaluator who wishes to continue to be a positive, vital influence must become familiar with the role of program monitoring within evaluation and understand what it means to develop useful and workable systems for program management. The evaluator should view program monitoring and information systems as one component of an overall, comprehensive evaluation plan. As such, it is important to understand how this portion operates within the entire plan.

Some Definitions of Program Monitoring

Once I found some literature related to program monitoring, it became apparent that no two authors agree on what monitoring is or what should be monitored. The magnitude of these differences appears as one begins to review what each implies (these are summarized in table 1).

To begin with one of the classic evaluation texts, Rossi, Freeman, and Wright (1979: 16) defined monitoring as the "assessment of whether or not a program is (1) operating in conformity to its design, and (2) reaching its specified target population." From their discussion, I was unable to determine when or how often such an assessment should be completed, and inferred that monitoring could involve a one-time study done to determine whether it is in compliance with its original plan.

Table 1

A Comparison of Different Definitions of Monitoring

Definition	Focus	Timing	Concept of Project
Rossi, Freeman and Wright	Compliance with original design and target population.	Possibly one time	Not Mentioned
ERS Standards	Program compliance, tracking services, and counting clients.	Continuous	On-going
World Bank	Project inputs and initial effects.	Continuous	With definite beginning
Wholey	Program effects and process.	Continuous	Not Mentioned
ISPC	Project inputs and outputs.	Continuous	With definite beginning

The ERS standards (ERS Council, 1982) also include program compliance with its definition of monitoring, but goes on to include "relatively straightforward tracking of services delivered and counting of clients." This description emphasizes repeated measurements of program activities related to policy and to services as well as clients. It also implies a concept of monitoring as a tool for program management of an on-going project.

The World Bank related monitoring to two other forms of evaluation (Casley and Lury, 1982: 4). For these authors, "monitoring assesses whether project inputs are being delivered, are being used as intended, and are having the initial effects as planned . . . . Evaluation assesses the overall project effects, both intentional and unintentional, and the impact . . . . [A]n on-going evaluation . . . examine[s] the assumptions and premises on which the project design was based" [italics in the original]. Here, monitoring goes beyond just program inputs to include some effects as well--although evaluation still involves the majority of the possible program results--and begins at project inception.

Wholey (1983: 154) refers to tracking program effects as "outcome monitoring." This type of monitoring concerns program performance, although he notes that process monitoring is also important. For outcome monitoring, however, the evaluator works on developing agreed-on program objectives and performance measures which managers can use to assist their decision making. This emphasis on the regular study of immediate outcomes reflects Wholey's attention to "results-oriented" managers.

As part of its own efforts in the field of evaluation, ISPC adapted and refined a definition of monitoring related to program development which drew upon involvement in international discussions related to monitoring and evaluation. In the model used by ISPC, four development components exist: program inputs (what is required for program implementation: the resources, money, staff, etc.), outputs (the immediate physical results from the inputs: clients trained, miles of road completed, wells dug, etc.), effects (the changes which result from the interactions between the outputs and the target population: changes in client behavior, the number of children immunized, an increased use of potable water, etc.), and impact (the far-reaching goal or long-term benefits: an increase in client income, a decrease in mortality, etc.). Monitoring involves periodic review of program inputs and outputs while evaluation focuses on measuring its impact, and on-going evaluation on periodic measurement of the assumed relationship between outputs and effects. Although similar to the World Bank's definition, ISPC emphasizes following the program's beginning and implementation when developing a monitoring strategy, leaving any effects as part of on-going evaluation.

These five definitions show what variety exists. Although repeated data collection occurs in most, it does not explicitly appear in Rossi et al's definition. In addition, their definition does not include the program effects or outcomes that some include. The matter is further complicated when one begins to think of the many types of data collection possible. For

example, what does one call a study which periodically collects data related to a program's impact--such as observing changes in the morbidity rates in an area? What about the case where, as part of a final evaluation, one collects data on the target population and compares it to the program's clientele?[1] Before we can intelligently discuss the role of monitoring within evaluation, or how to develop a good monitoring system, we must have a working definition of monitoring that allows for common understanding.

Towards a Working Definition of Monitoring

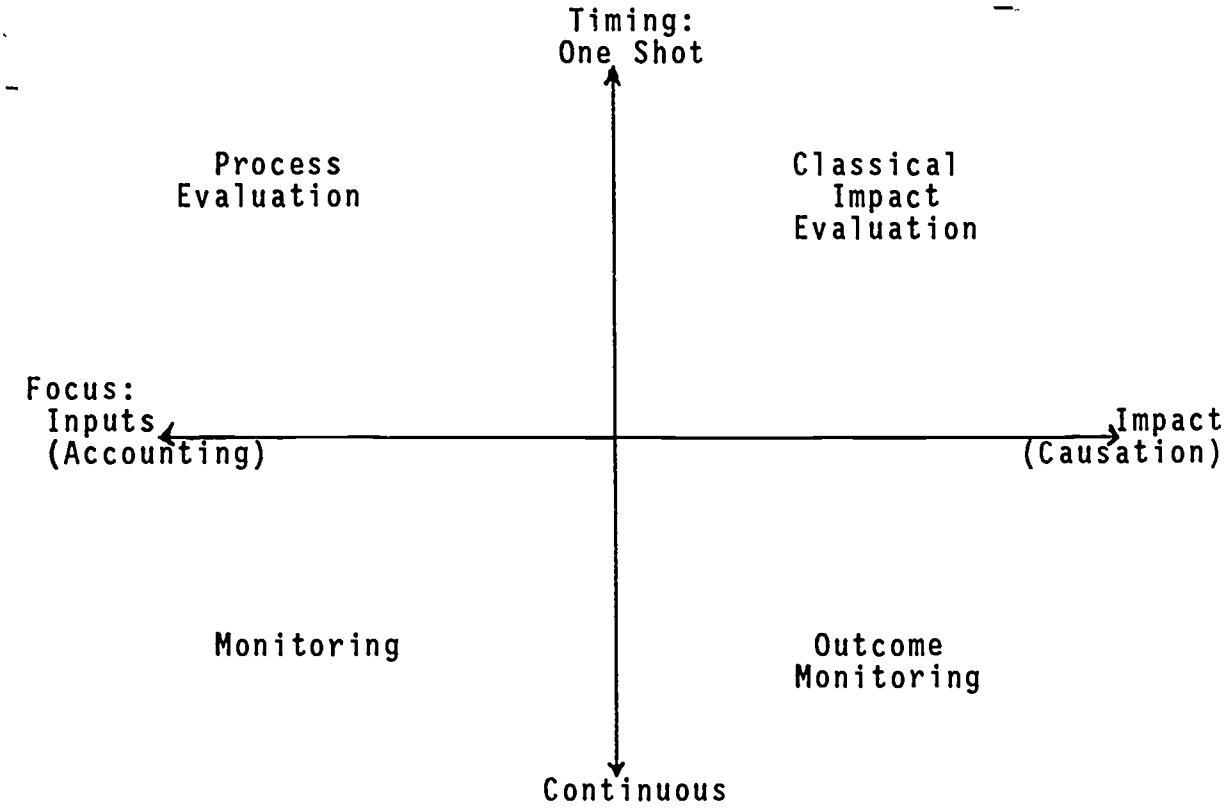
This section evolved from a discussion I had concerning the very problems I experienced above. A colleague noted that perhaps the problem with trying to clearly distinguish between monitoring and impact evaluation occurs because they are really on a continuum with one end being the impact evaluation and the other being the very regular monitoring of program inputs.

Considering all forms of evaluation on a continuum proved very helpful, but as I began to consider the characteristics of evaluation, I realized it required more than one dimension. As one can see from the discussion in the previous section, two major characteristics appear: its focus (or the question it answers), and its timing (how often it is done). If these two dimensions are crossed, we have a basis for defining both monitoring and impact evaluations and the range between (see figure 1).

The first dimension, focus, stretches from the most basic program input information which most resembles an accounting

Figure 1

A Two Dimensional Concept of the Different Types of Evaluation



system to the broadest impact questions which seek to link observed changes with the program under study. The second dimension, timing, involves moving from frequent, repetitive data collection or measurement to one-time only data collection/measurement.

The results of crossing these two dimensions provide a better understanding of how the different definitions described above array themselves. The upper left-hand quadrant corresponds to the definition offered by Rossi et al. These are studies which collect data one time related to the program's inputs (and possibly outputs). The upper right-hand quadrant is the classic evaluation design where infrequent data collection efforts try to establish causation between the program and the resulting changes (as one moves north along the timing dimension, this would become the ex post facto design). The lower right-hand quadrant relates to Wholey's outcome monitoring. This involves periodic data collection related to the changes affected by a program. The lower left-hand quadrant is what most would probably agree is monitoring: the periodic collection of information related to program implementation and activities. For the purposes of this panel, we will use "monitoring" in its most generic sense to include both the lower left-hand and right-hand quadrants and "impact evaluation" for the upper right-hand quadrant.

Thus, data collection for monitoring purposes would address such program management questions as "Are the materials needed for program implementation arriving as scheduled and when needed?", "Is the program implementation progressing as sche-

duled?" and "Are there observable changes occurring?" Impact evaluation would consider such issues as "Did the observed changes result from program activities, or were there other extraneous conditions which created the changes?"

The Importance of the Evaluator in Developing a Monitoring System

For the evaluator, program monitoring represents a chance to become involved in everyday program activities and decisions. The ERS standards note that this form of evaluation "puts to rest the notion that the evaluator necessarily comes in, does the job, and then gets out" (ERS Council, 1982).

Because it is an evaluation activity, program monitoring requires the evaluator to follow the same steps he would in designing a long-term impact evaluation. The evaluator must work with decision makers in determining what information they need to manage a program and how to collect that information. The major differences involve the information collected and the schedule of results. As we noted above, program monitoring information involves following a program's inputs and outputs to ensure that it is operating as required and where it is not, to identify problem areas. Thus, a monitoring system can note that a problem exists and where corrective actions should occur.

Part of creating a usable system may include helping program managers understand how they make decisions, and how to make informed ones. Particularly in some of the countries where we work, we have found that managers lack training in making decisions based on such information. This problem, however, is not limited to developing countries. Patton (1982: 229) has

found similar problems with social program managers in the U.S. as well. Thus, prior to even identifying the questions to be answered, the evaluator may have to work with managers to identify the types of decisions they make and the information they need to make them. The next step would be to determine and design the data collection and analysis process.

Once managers see how useful a program monitoring or information system can be, the evaluator's role may shift to ensure that managers do not become overly enthusiastic and try to drastically increase the amount of information collected. The storage space and ease of computer output often create a great temptation. The evaluator must force managers to decide what information is collected based on the criteria of "what difference will knowing this information make?" In other words, if the information is not related to some specific decision, and if the manager will not take some action based on knowing a specific piece of information, the monitoring system should not include it. This creates a hard role for the evaluator to play, but it is important if the information system is to remain useful and relevant, and not overload managers with more information than they can truly use.

Implications for Evaluators

In our own work, we have seen a major increase in the use and interest in program monitoring and information systems. While such systems need not be computerized, the likelihood is that they will be because the computer can make the process and analysis stage much easier. This places a burden on the evalu-

ator to become sufficiently familiar with computers to know what they are capable of doing. I am not suggesting that we become data processing experts, but we, as evaluators, should have the expertise to help decision makers translate their questions into measurable items and to know how to best collect that information.

This shift also implies that we must be sufficiently familiar with management activities to be able to discuss management and decision making processes intelligently with information users. This is particularly true for situations where decision making has been done on an ad-hoc or informal basis.

A final adjustment that evaluators will also have to make is how to use program monitoring and information systems as part of a comprehensive impact evaluation. The information regularly collected as part of the system can become an important resource for describing program implementation, process, and even, outcomes. In projects which expect the evaluator to design both a monitoring and impact evaluation plan, the evaluator should also consider how the monitoring information might enhance the impact evaluation.

The purpose of a good program monitoring or information system falls easily within the evaluator's domain. Evaluation has always had as its main goal providing useful, timely data regarding a program to interested parties. Program monitoring seeks to provide this information on a regular basis during project implementation to help managers effectively manage their

programs. For the evaluator, this means understanding project management from the manager's perspective and knowing where program information is most needed and most useful.

FOOTNOTES

1. Groups such as the World Bank and AID who separate monitoring from evaluation further complicated my problems. This separation, however, appears to result from the disenchantment I mentioned earlier. "Evaluation," as they use it, appears to be the long-term impact evaluation. To avoid confusion, then, I will use the term "impact evaluation" for this type of evaluation.

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