

Principles for Program Evaluation in Education

Kevin Laws* and Assist. Prof. Dr. Nittaya Kantawong

*Faculty of Education and Social Work, University of Sydney, Australia.

E-mail: k.laws@edfac.usyd.edu.au

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In 1999 the National Education Act mandated the evaluation of all educational institutions in Thailand at least once every five years. This was to ensure improvement of educational quality and standards at all levels. Thus, the institutions themselves have to set up a system to maintain internal quality assurance. These internal mechanisms are to be regarded as part of each institution's educational administration. Program evaluation is to become a continuous process.

The development of the evaluation model outlined in this article drew upon the theoretical and research literature in the field and the context of the study, applying it to a specific program. This allowed the model to be refined and revised, so that it may be utilised in the evaluation of other programs.

Developing a model for program evaluation

There are at least two main needs for an alternative program evaluation model. One is the shortcoming in the evaluation models/ap-

proaches previously used, and second, there is a requirement by law that all educational institutions will receive external quality evaluation. This model is an attempt to provide for both formative and summative evaluation. Formative evaluations strengthen or improve the object being evaluated—they help form it by examining the delivery of the program, the quality of its implementation, and the assessment of the organisational context, personnel, procedures, inputs, and so on. Summative evaluation, in contrast, examines the effects or outcomes of some object - summarising it by describing what happens subsequent to the delivery of the program, assessing whether the object can be said to have caused the outcome, determining the overall impact of the causal factors beyond immediate target outcomes, and estimating the relative costs associated with the object.

Audiences for the evaluation

The audiences of the evaluation means those who will or should read or hear of the evaluation, either during or at the end of the

evaluation process, including many who are or who are not being evaluated (Scriven, 1991). The audiences to an evaluation might include the groups of people below.

Sponsors : Sponsors are defined as the agency that authorises the evaluation and provides the necessary fiscal resources to support the evaluation process.

Clients : Clients are defined as the specific agency that requested the evaluation. **Stakeholders:** Stakeholders are defined as those who may be directly affected by evaluation results, for example, the internal and external participants. Internal participants might be program staff, policy-makers, faculty members, students, etc. External participants include employers, communities, graduates, etc.

Steps in an evaluation

The model involves four steps. The first step is to clarify how the program works by developing a program logic model. The second step is preparing for an evaluation by identifying the stakeholders, developing evaluation questions, budgeting for the evaluation, and selecting an evaluator. The third step is designing and conducting an evaluation by determining data collection methods, collecting data, and analysing and interpreting data. The final step in evaluation will be utilising the evaluation by communicating findings and utilising the process and results.

Step 1: Developing a logic model for program evaluation means preparing a visual representation of a plausible and sensible method of how a program will work under certain conditions. It is fundamental to program evaluation (Bickman, 1987; Dwyer, 1997; Julian, Jones, & Deyo, 1995).

The program logic model includes the following features.

1. Assumptions underlying the program:
 - What does the program expect to achieve?
 - How does the program achieve this?
 - Who will be involved in program evaluation?
 - Why is it important to evaluate the program?
2. Program components:
 - Resources: the resources and/or barriers which enable or limit the program's effectiveness. This component is sometimes referred to as "input."
 - Activities: the processes, techniques, tools, events, technology, and actions of an intentional part of program implementation.
 - Output: the direct results of program activities.
 - Outcomes: the specific changes in attitudes, behaviours, knowledge, skills, status, or level of functioning expected to result from program activities. These are often expressed at

an individual level.

- Impacts: organisational, community, and/or system level changes expected to result from program activities.

Step 2 : Planning helps to clarify the exact nature and scope of the evaluation. Ideally, it engages representatives from all the different stakeholder groups to provide of perspectives about the program being evaluated. The planning step includes identifying stakeholders, developing evaluation questions, budgeting for an evaluation, and selecting an evaluator. These are described as follows:

Identifying stakeholders : Program evaluation requires multiple stakeholders to gather multiple perspectives about the salient issues of the program. In order to gain multiple perspectives, many stakeholders need to be involved in evaluation discussions. Stakeholders, as defined by the Kellogg Foundation (1998), are any person or group who has an interest in the program being evaluated or in the results of the evaluation. Similar comments were made by Worthen et al. (1997) that stakeholders are individuals with a stake (vested interest) in both the program and the results of the evaluation. Furthermore Smith (1989) defines stakeholders as those who have a vested interest in a program, and whose decisions can affect the program's future in very important ways. Stakeholders therefore include a wide variety of

people: sponsors of the program, program directors, staff, program clients, others bodies working with the program, interest groups, and the general public whose decision can be useful for program improvement.

Although gathering multiple perspectives may need to involve many stakeholders, involving every stakeholder may be difficult. When designing an evaluation it is necessary to consult representatives from as many groups as possible. These groups of stakeholders will have different interests and views so that they can provide useful feedback to the program. However, it must be accepted that it will not always be possible to consult every stakeholder group for every evaluation.

Developing evaluation questions: Once the stakeholders are identified, the main concern at this stage is to determine what evaluation questions needed to be asked. The first step is to set up the evaluation goals. The goals need to be the issues that are to be addressed by program evaluation. The questions will depend on the ultimate purpose of the evaluation. When designing evaluation questions they need to be made specific in order to be answerable. However, the questions can be organised based on the program logic model as described in the first step of evaluation. The program logic model shows how the program works. The model provides a focus for evaluation and helps to clarify which variables are critical to

achieving the desired outcomes of the evaluation. The logic model helps in highlighting the connections between program components and outcomes as well as the assumptions underlying the program so that this can help narrow the questions. Therefore, developing questions based on the program logic model will help to determine which questions to target in evaluation.

In addition, the questions must provide information by identifying stakeholders' awareness of a program and interest in a program. Another suggestion is that the questions should secure information from the stakeholders and it is recommended that the questions should be open-ended for the purpose of the evaluation. A further suggestion is that the questions should be about what stakeholders are qualified to answer.

Budgeting for an evaluation: Usually a program evaluation requires a specific budget. Qualitative evaluation studies based on interpretivist/constructivist assumptions can be very effective at getting inside the program and really understanding how and why it works. However, they may be costly to implement, since they require significant time for talking with the people involved with the program and considerable time for the analysis.

Since conducting a program evaluation requires resources including time, money and people, the budget needs to be considered as

part of the up-front planning. At times the available budget will determine the extent and scope of a program evaluation because it will not be possible to achieve a total evaluation of all elements in a program.

Selecting an evaluator: Another decision to be made is who will conduct the evaluation. The choice depends on the needs of the program and the objectives of the evaluation. Not all programs require an independent evaluator. A short-term evaluation may best be handled internally, while an evaluation of large programs might require the assistance of an outside evaluator. Generally, there are three types of evaluators: internal evaluators, external evaluators, and internal evaluators with an external evaluator consultant (Kellogg, 1998). An internal evaluator is any staff person directly involved in the program under evaluation, or in the agency in which the program is housed. For example, a program manager could function as an internal evaluator. An external evaluator is any individual not directly employed by the program under evaluation. In the third type internal staff conducts the evaluation and are assisted by an external evaluator with the technical aspects of the evaluation and also in the gathering of specialised information.

Regardless of who the evaluator will be, it is important also to consider the evaluator's role. For example, if the evaluation is focused on facilitating program improvements, then it

should look for an evaluator who has a good understanding of the program and is reflective. However, the Kellogg Foundation (1998) recommends that “the most important overall characteristics to look for in an evaluator are the ability to remain flexible and to problem solve” (p. 60).

Step 3 : Implementation includes three phases of evaluation. Determining data-collection methods is the first phase, followed by collecting data. After data have been collected they need to be analysed and interpreted so that the information can be obtained. Program evaluation must be carefully designed to strengthen program activities. Every phase of implementation needs to create a flexible and responsive design, to collect and analyse information from multiple perspectives, and to keep evaluation questions in mind.

Determining data-collection methods: There are a number of ways to collect data but there is no single best way. It has been discussed earlier in step two: planning, that program evaluation needs multiple stakeholders to gain multiple perspectives. In addition, the use of multiple evaluation methods is necessary. The decision about which approach to use depends on many factors. Focusing on the specific questions to be addressed will help in deciding what methods to use.

The most common data-collection

approaches include observation, interviews, focus groups, surveys, written questionnaires, document reviews, tests and assessments, case study, and self-report checklists. The choice depends on the situation. Each is more appropriate in some situations than others. All can be used systematically, even if they vary in the amount of structure used. Using two or more methods often provides a more thorough account and cross-validates the findings.

Many evaluations deal to some extent with quantitative information in which data in the form of numbers is obtained. In contrast, the use of qualitative information means describing how a program functions and what it means to the people involved. This method has become popular recently. It provides a context for the program, and it may mean more to the program director who must make recommendations for improvement. Because qualitative information is full of people’s feelings, it may give outside audiences a real understanding of the difference the program usually makes in the lives of people (Kellogg, 1998).

Collecting data: Once data-collection methods have been selected, it is time to collect data. Before entering into the field there are a few things to remember. First, the interview guides should be developed together with open-ended questions. Next, the existing information about the target population, community, and program should be examined. An important

point to keep in mind is to “collect only the information you are going to use, and use all the information collected” (Kellogg, 1998, p. 85).

Analysing and interpreting data: After an evaluation has been planned and data have been collected, the information must be described, analysed, interpreted, and a judgement needs to be made about the meaning of the findings in the context of the program. The aim of data analysis is to synthesis information to make sense out of it. Different techniques are appropriate depending on whether the methods used are qualitative or quantitative.

When analysing quantitative or qualitative data, it is sensible to begin with a review of evaluation goals, that is, the reason for undertaking the evaluation. McNamara(1998) recommends that the following be considered:

1. Basic analysis of “quantitative” information: 1) Make copies of the data and store the master copy away, using the copy for making edits, cutting and pastings, etc. 2) Tabulate the information, that is, add up the number of ratings, ranking, yes’s, no’s, for each question. 3) For ratings and ranking, consider computing a mean, or average, for each question. 4) Consider conveying the range of answers.

2. Basic analysis of “qualitative” information: 1) Read through all data. 2) Organise comments into similar categories, for example, concerns, suggestions, strengths, weaknesses, similar experiences, program inputs, recommenda-

tions, outputs, outcomes indicators, etc. 3) Label the categories or themes, for example, concerns, suggestions, etc. 4) Attempt to identify patterns, or associations and causal relationships in the themes. 5) Keeps all commentary for several years after completion in case it is needed for future reference.

Step 4 : Utilising the evaluation includes how to communicate the findings and how to utilise the process and results of evaluation.

Communicating the findings: After the evaluation has been completed, it is time to communicate the findings. The important thing to remember is to communicate the findings to the respondents who participated in the evaluation. This is to ensure their cooperation in the future work and also to be courteous.

Since time and resources have been expended in conducting a program evaluation, the results need to be utilised to maximise the investment in the program. Think of the ways to communicate the findings. An informal conversation may have more influence than a formal report. However, deciding what communication methods to use will depend upon the audience. There are a variety of possibilities, such as: a written report, short summary statements, an executive summary, film or videotape, slide-tape presentation, pictures, wall charts, bulletin boards, displays, etc. Another good way is to ask the audience to suggest

ways they would like to receive the information.

Utilising the process and results of evaluation: Above all, an evaluation must provide useable information. It must enable program directors, for example, to guide and shape their programs toward the greatest effectiveness (Kellogg, 1998, p. 99).

The final phase to discuss is how to use the process and results of the evaluation. Useful evaluation processes and results can inform decisions, clarify options, identify strengths and weaknesses, and provide information on program improvements. Therefore, consider the best ways to utilise them.

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