

Evaluating International Agricultural and Extension Projects: Problems, Challenges, and Strategies

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Abstract

This study examined evaluation issues related to international agricultural and extension education projects. Objectives of the study were to: 1) identify and describe problems and challenges to evaluating international agricultural and extension education projects, and 2) review evaluation models that are appropriate for international agricultural and extension education projects. Data sources included books, journal articles, conference proceedings, evaluation reports, government documents, and interviews with select faculty. Findings revealed that there are many challenges to evaluating international agricultural and extension education projects. These include: 1) lack of time resulting in inadequate plans to evaluate projects, 2) extensive reliance on single method of evaluation, 3) lack of readily available evaluation instruments, and 4) cultural and language problem. Four evaluation models appropriate for international agricultural and extension education were also identified and described. Based on the information obtained through literature and faculty interviews, a new framework to evaluate international agricultural and extension education projects was proposed.

Introduction

Increased emphasis is placed on project performance and outcomes by government, donor agencies, and universities engaged in international agricultural development. A key component of any proposal related to international agricultural development contains a section on evaluation criteria and methodology. Projects that have cost-benefit analysis as a major objective are easy to measure and document the outcomes. However, projects that deal with educational programs (creating awareness, knowledge and skill development, and understanding of problems and/or issues) are difficult to measure. One of the challenges is defining appropriate "impact" indicators. Early identification of defined and needed indicators through program objectives are not emphasized (Mustian, 1999 and

Radhakrishna, 1999). According to Bennett (1994), early identification of indicators through measurable program objectives will help strengthen planning and evaluating educational programs. Therefore, project investigators and evaluators should consider action specifying the "chain of program events" and the "kinds of evidences" and/or "appropriate indicators" for each event in the chain (Verma and Burnett, 1999).

Several researchers and evaluators have addressed the problems and challenges relative to evaluating educational programs in both domestic and international settings (Bayles, 1998; Hoffstrom and Mcdaniel, 1996; Mustian, 1999; Richardson, 1998; Radhakrishna, 1999; and Verma, 1998). Bayles (1998) examined evaluation efforts of 147 agricultural projects funded by the United States Agency for

International Development (USAID) between 1985 and 1995. Of these 147 projects, 68 were in Africa, 49 in Latin America and 30 in Asia involving a total budget of \$2.3 billion. Findings from Bayles's study revealed: 1) only 94 projects (64%) reported at least one evaluation, 2) seventy-two projects included an assessment of socio-economic impact and only one project had an impact evaluation, and 3) more number of projects in Asia and Latin America were evaluated when compared to projects in Africa. He found that the evaluation efforts of most projects that had cost-benefit analysis were successful and project investigators met the evaluation criteria of USAID. However, a majority of projects that dealt with educational programs did not provide any evaluation information. Major problems in evaluating projects included frequent changes in management, unrealistic project designs or goals and a lack of baseline data. Tilburg and Haan (1995) and Gow and Morss (1988) reported limited availability of project data as a major hindrance to project monitoring and evaluation in developing countries.

Chambers (1991) identified six biases that might limit the evaluation of agricultural and rural development projects in developing countries. The six biases were: 1) spatial—project staff and researchers focusing only on urban centers and roadside projects, 2) project—evaluation plans showing little interest in what happens to the rural poor and the disadvantaged, 3) person—tend to reach or get information from elite groups, 4) dry-season—few visits during dry season resulting in inadequate assessment of flooding or drought, 5) diplomatic—combination of politeness, fear, embarrassment, and language problems frequently deter visitors from speaking to the poor and the underprivileged, and 6) professional—tend to reach wealthier, better educated, and more progressive farmers.

Hoffstrom and McDaniel studied post-training evaluation of Cochran Program since 1983 and found that their evaluation efforts were

successful in getting valuable feedback. Mustian (1999) indicated that extension educators need to focus on program models where outcomes are the basic function. Similarly, Richardson (1998) stated that extension educators have major roles to play in documenting project outcomes. Any programs and models used in international settings should also address the expectations that agricultural and extension programs do bring changes in individuals, families and communities (Verma, 1998).

The Joint Committee on Standards for Educational Evaluation (1994) proposed standards that should be considered for evaluating educational efforts. The committee identified a total of 30 standards grouped across four categories—utility standards, feasibility standards, proprietary standards, and accuracy standards.

Purpose and Objectives

The overall purpose of the study was to describe problems, challenges, and strategies relative to evaluation efforts in international agricultural and extension education projects. This paper specifically examined: 1) the problems and challenges in evaluating international agricultural and extension education projects, 2) identify and describe evaluation models that are appropriate for international agricultural and extension education projects, and 3) suggest strategies to overcome problems and challenges to evaluating international agricultural and extension education projects.

Methods and Data Sources

Review of literature and personal experience of the author were the data sources for the study. A number of books, journal articles, and conference proceedings and government documents were reviewed to identify problems and challenges in evaluating international agricultural and extension education programs/projects. Information from informal discussions and interviews with faculty were also documented as evidence of data.

According to Seidman (1998), interviews permit explicit focus on the researcher's personal experience combined with those of the interviewees (p. 113). In addition, four evaluation models were also identified, reviewed and described.

Results and/or Conclusions

Problems and Challenges

The first objective was to identify problems and challenges to evaluating international agricultural and extension education programs and/or projects. The following problems and challenges were identified: 1) lack of time resulting in inadequate plans to evaluate projects, 2) greater demand by donor agencies to determine "impact" or "outcomes" of educational programs, 3) problems in defining appropriate impact indicators to show that project targets have been achieved, 4) scattered sources of evidences, program impact versus other sources of change, 5) assessments don't go beyond KOSA (knowledge, opinion, skill and aspiration) level, 6) extensive reliance on single method of evaluation, 7) lack of readily available evaluation instruments, 8) cultural and language problems, 9) lack of time and limited skills in planning, implementing and interpreting evaluation results, 10) limited feedback from donor agencies or sponsors, and 11) limited availability of project data.

Evaluation Models

Based on an extensive review of literature and author's own experience in studying evaluation models, four models were identified and found useful to evaluate international agricultural and extension education programs. The four models identified were: 1) Francine Jacob's evaluation model, 2) Robert Stake evaluation framework, 3) Rockwell and Bennett's Targeting Outcomes of Program (TOPs) model, and 4) Kirkpatrick's evaluation framework. Jacob's five-tier evaluation model included pre-implementation, accountability, program clarification, progress toward objective and program impact (Figure 1). This model is very useful to guide planning and evaluation efforts for projects dealing with families, communities, youth, and children.

Robert Stake's framework to evaluation emphasizes targets, strategies, and outcomes (Figure 2). Stake's approach suggests that one has to clarify intentions and then periodically look at what is actually happening. Such approach helps to make corrections as the projects go through various stages of implementation. In addition, the model is particularly good at helping educators plan thoroughly in a way that creates the kinds of information needed to design an evaluation.

Bennett and Rockwell model is the most common and widely used evaluation model in extension (Figure 3). This model has two parts—program development and program performance on a continuum. Each of the parts has the same seven steps (input, activities, participation, reaction, knowledge, skills, opinions, aspirations and practice change). In the program development part, emphasis is on what needs to be done to bring about changes in program participants while in the program performance part, educators examine what actually happened as a result of the program.

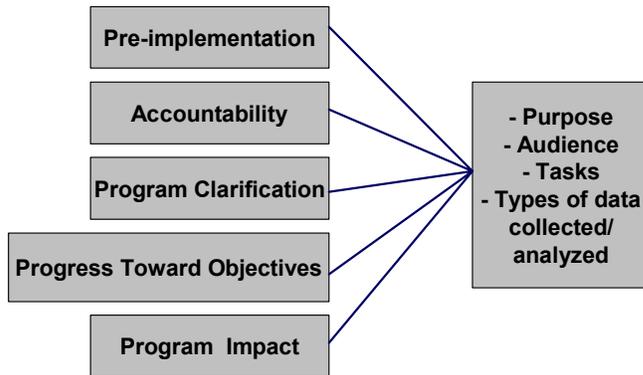


Figure 1: Jacobs Five-Tier Approach to Program Evaluation

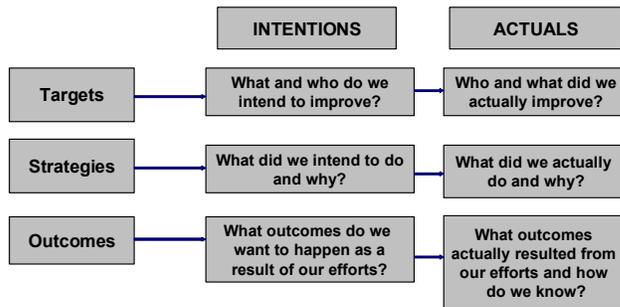


Figure 2: Stake Approach to Program Evaluation

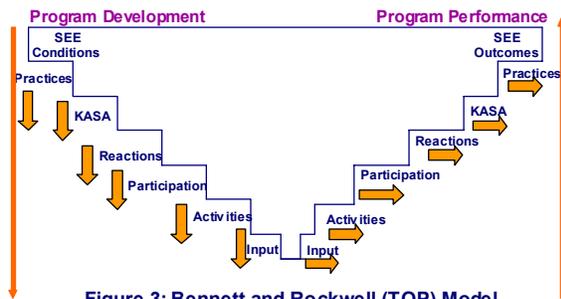


Figure 3: Bennett and Rockwell (TOP) Model

Finally, Kirkpatrick's evaluation model is most commonly used for educational programs that deal with learning (Figure 4). It clarifies the meaning of evaluation in simple and understandable terms and offers guidelines and suggestions on how to accomplish an evaluation. This model has four levels—reactions, learning, job behavior and results.

Review of these four models indicate both commonalities and differences in the approach to evaluation of international agricultural and extension education programs. In addition, the four models have strengths and weaknesses. For example, Jacob's model asks for a variety of evaluation information from different types of stakeholders. The model helps educators to think through the various kinds of information needed within the five-tier framework. The model, however, provides little help to educators in knowing what to do. In contrast, the Stake framework provides further depth of discussion needed to identify information/data listed in Jacob's one through four tiers. Both

Bennett and Rockwell and Kirkpatrick's models focus more on educational outcomes and less on project impacts. The challenge for international agricultural and extension educators is to glean the critical and good points from these models and use what is best for their projects.

Therefore, a new evaluation framework was proposed (Figure 5). The proposed model asks three evaluation questions and outlines the data/information needed to answer the questions. The first question relates to problem assessment and corresponding goals and objectives designed to address the problem. The second question relates to the desired situation or the ideal situation. Comparison of questions one and two will help identify strategies to reduce or overcome the problem. In other words, what needs to be done—plan of action needed to bring about change. Finally, question three relates to what actually happened, that is, did the project accomplish its goals and objectives.

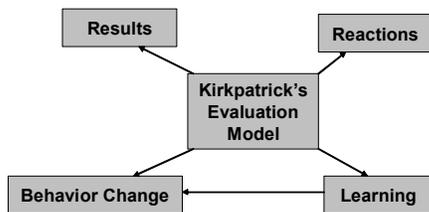


Figure 4: Kirkpatrick's Training Evaluation Model

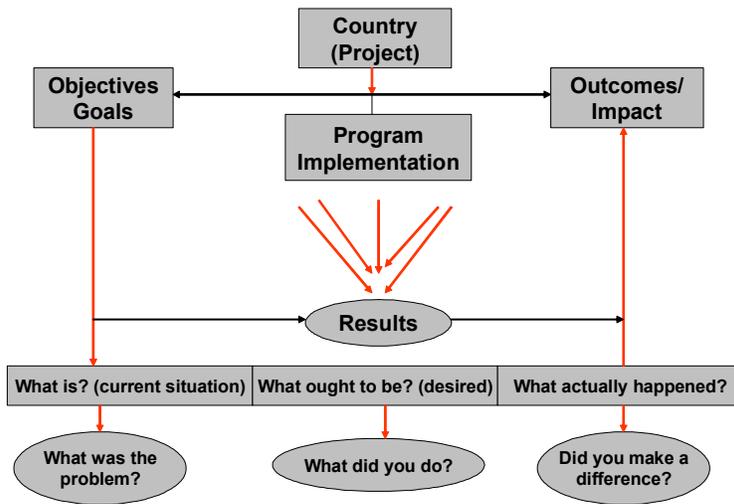


Figure 5: Proposed Evaluation Model

Summary of Faculty Interviews

Four faculty in the department of agricultural and extension education at Penn State were interviewed to provide perspectives on international agricultural and extension education projects they conducted. These faculty had completed projects in countries of Africa, Asia, Latin America and Eastern Europe. Interview questions focused around: 1) involvement in international projects, 2) level of evaluation expertise they possessed, 3) level of importance given to project evaluation, 4) submission of evaluation reports to sponsors and feedback, if any from sponsor, 5) barriers/challenges they encountered to evaluate projects, and 6) lessons learned and strategies to improve evaluation efforts. Each interview lasted about 20-30 minutes in length. In addition, faculty also provided additional information relative to their projects.

Three of the faculty said that they gave greater emphasis to evaluation in their projects. However, one faculty indicated the emphasis depended on the sponsoring agency. Almost all faculty described their evaluation competency

level as intermediate to basic. Use of evaluation methods in their projects ranged from none to extensive. Evaluation methods used included self-evaluations, needs assessments, self-designed evaluation surveys, pre and post training assessments, and focus groups. Three faculty indicated that they submitted evaluation reports to their sponsors and feedback they received included an acknowledgement and some positive comments on completing the projects on time.

Faculty identified several barriers to conducting systematic evaluations of international agricultural and extension education projects. These included: 1) lack of well developed survey instruments, 2) lack of appropriate measures or extensive use of single methods of evaluation, 3) language and interpreter problems, 4) lack of time to do a systematic evaluation; and in some instances, no desire on part of the host country to do evaluations, 5) logistics, 6) program management, and 7) limited availability of skilled personnel to collect data.

Faculty offered several suggestions to overcome the barriers—planning and evaluation from the start, input from all participants (stakeholders), training host country personnel in evaluation methods, repository of surveys and questions, pilot testing, culture and language training, enough time from project initiation to project evaluation, and training of field-level staff in data collection.

The need for offering training or workshops focusing on evaluation of international agricultural and extension education projects was emphasized by all faculty. They indicated that training should focus on: various evaluation models, evaluation plan, developing measurable objectives, designing surveys and questions, quantitative and qualitative evaluation methods, exposure to monitoring and evaluation software, and language and cultural sensitivity training. Faculty also suggested for greater alignment of funding towards evaluation process, collaborative efforts, and feedback to improve programs.

Educational Importance

The foregoing review suggests that there are many challenges to evaluation in international settings. In addition, the review also suggests we must change to address many of the challenges identified. The following recommendations or actions are offered based on the findings of the study.

First, an evaluation model matrix (Figure 6) for key program areas in international agricultural and extension education needs to be developed. Such a matrix would help identify appropriate evaluation models depending on the program areas. Early identification and selection of models will help answer several evaluation questions, including selection of evaluation methods, the type of information to be collected, identification of appropriate measures and indicators, etc.

Second, a need exists for creation of an evaluation information/resource exchange where faculty and students can share resources on evaluation issues. Such an information resource would save quite a bit of time and money for international agricultural and extension education programs/projects.

Finally, a training program to build evaluation capacity of international agricultural and extension educators should be offered. In addition, potential for delivery of training using distance technology should be explored.

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