A FRAMEWORK FOR STUDYING RELEVANCE OF AGRICULTURAL EDUCATION IN THE UNITED STATES

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Abstract

Access to higher education in agriculture is limited in most developing countries. There has been heavy reliance on the United States and other developed countries to provide training and graduate degrees for agricultural professionals from developing countries. A key question for educators, government officials, and researchers is how can we promote relevant educational experiences for international students studying in the United States? This paper presents a framework for examining educational relevance to help decision makers and researchers clarify important variables, processes, and dynamics related to relevance.

What is Educational Relevance?

Broadly speaking, educational relevance can be viewed as the degree to which stakeholders' desired outcomes are achieved as a result of the educational process. Stakeholders are: (a) those who make or influence decisions or, (b) those who are influenced by others' decisions. They may have different "desired outcomes" related to the environment in which they operate. "Educational process" includes all the factors, decisions, and variables involved, from the time an educational program is considered through selection, placement, training in the United States, and supervision of the participant in a job back in the home country. Stakeholder groups, environment, and educational process (including decision phases and four types of variables) will be discussed as a basis for a model of educational relevance.

Stakeholder Groups

Five major stakeholder groups who make decisions impacting educational relevance are: (a) home country government officials who make decisions about who to send for training in the United States, what training they are to receive, and the support for their job upon their return home after training, (b) funding agencies who sponsor training in the United States, 8 participants who receive training in the United States, (d) contractors who place participants at United States universities, and monitor their progress, and (e) educators, researchers, administrators, and staff at United States institutions who design curricula and approaches for teaching and who support international students.

Each of these groups has a unique stake in educational relevance issues. Integrating these differences in perspective and desired outcomes is a key to developing relevant programs. For
example, government officials in the home country likely emphasize outcomes related to government/ministry development goals. They might be concerned, for example, that participants get skills, techniques, and appropriate technologies that can be used on the development projects when they return home.

While funding agencies presumably agree with government development goals, they are likely to view relevance within a shorter time frame that corresponds to their funding time frames. Also, funders' goals might include priorities that may not be emphasized by a host government--such as ensuring that women, minority groups, and the rural poor are represented in the candidate pool, for example.

Participants who receive training in the United States also presumably agree with government development goals. However, since in many countries individuals change jobs to gain promotions, participants are likely to emphasize professional goals when assessing relevance. Also, their training, background, and/or interests might not fit the expectations of the home government. For example, they might be trained as technical researchers, but, be expected by their government to administer programs or teach; roles that require people and process skills.

Faculty, administrators, and other personnel in United States institutions also have unique perspectives. While they obviously want to provide participants skills to use upon their return home, they are likely to view relevance in other ways as well. For example, students earning master's degrees in United States colleges of agriculture might receive training more relevant to gaining entrance to a state-side Ph.D. program than to practical applications of skills back in their home countries.

Contractors who place and monitor participants in United States universities play a unique role as intermediaries between home country governments and universities. They are likely to view educational relevancy as a balancing of government, participant, and university goals and perspectives. In other words, their "stake" in the process is to help other stakeholders understand and agree on training goals, programs, content, and process. They also ensure that participants get adequate and timely support and monitor progress so that training programs are completed in an agreed-upon time frame.

Environment

It seems clear, then, that educational relevance may mean different things to different stakeholder groups. These differences arise because each group operates within a particular personal, cultural, economic, political, social, administrative, and legal environment. Each environment exerts unique influences that impact the decisions stakeholder groups make.

While each stakeholder group operates within a unique environment, some environments are clearly more alike than others. For instance, the home country environment exerts common influences on home country government officials and participants. On the other hand, the United States environment has common elements for United States funding agencies, placement contractors, and university personnel. A major challenge in achieving educational relevance is to work toward complementary agreements between United States stakeholders and home country stakeholders.

Educational Process

Educational relevance can be viewed as being impacted by a decision process that includes four phases: (a) candidate selection, (b) placement in a training institution, (c) the educational program/experience itself and (d) placement and follow-up in the home country. While we would expect that educational relevance is highly influenced by the United States educational program and the participants' experiences while in the United States, the other phases of the process are also critical for understanding educational relevance (as pointed out by Pina, 1986.) A number of variables are important for each phase of this process. In addition to the
environment discussed earlier our discussion includes three other types of variables identified by Semlak (1991) that are relevant to this decision process. These are antecedent variables, those in place before an intervention; intervening variables, those impacted by the intervention; and outcome variables, those that result from the intervention. The number of stakeholders, decisions and variables suggest the need for a model that can help researchers and decision makers clearly identify issues.

**Decision Process Model of Educational Relevance**

Figure 1 offers a model to help examine and explain educational relevance based on a view of educational planning as a dynamic process considering numerous variables at each phase. This model views educational relevance as dependent on a series of decisions made by various stakeholder groups. These decisions fall into four major phases. The influence of various stakeholder groups on decisions varies from phase to phase. Decisions within each phase influence decisions in subsequent phases. Decisions made in phase I influence and set the stage for decisions in phase II and so on through phase IV. The dark arrows indicate primary direction and flow of decisions from one phase to the next. The light arrows indicate potential feedback loops through which knowledge/insights gained can be used to influence future decisions related to educational relevance.

**Phases of the Model**

The Decision Process Model acknowledges that four types of variables; i.e., the environmental, antecedent, intervening, and outcome variables, operate within each of four phases of the process. This section illustrates the important variables, decisions and research questions in each phase of the model as outlined in Figure 1. This includes discussion of: (a) the major decisions in each phase, (b) the primary decision makers (listed in order of who likely has the most influence on the decisions in each phase), (c) the major factors influencing those decisions, (d) the primary environmental influences, (e) the desired outcome of that phase and (f) examples of possible research and/or planning questions related to that phase.

During **Phase I** the major decisions are the selection of the candidate and determination of the training desired for that candidate. The primary decision makers (stakeholders) are government officials working in collaboration with funding agencies, usually through development projects with specified goals. Also, potential participants are decision makers to the extent they pursue and lobby for training.

Decisions about what type of training is needed (intervening variable) are based primarily on home country development goals, funding agency goals, and the skills/education of personnel available for training (antecedent variables). Candidate selection (intervening variable) is based on antecedent factors such as the candidates' experience, education, skills, motivation and, to some extent, age, gender, and ethnic background.

The primary environmental influence of this phase is the home country, although, if United States donors are involved, priorities based on the United States environment will be represented by those donors through the goals, approaches, and priorities of their development projects.

The desired outcome of phase I is the selection of a well-qualified candidate and a clear description of the training desired for that candidate within a specified time. For United States Agency for International Development (USAID)-sponsored participants, the desired training is described in a Project Implementation Order/Participant (PIO/P) forwarded to the placement contractor with documentation of the participant's training, education, English language skills, and other required entrance documentation. Once the training need is identified and the candidate is selected (outcomes of phase I) these become antecedent variables or "givens" for decisions.
made in subsequent phases. Research questions in this phase might include: What information is needed to make good decisions in phase I? What personal characteristics of participants relate to educational relevance? What critical environmental factors influence selection of participants, for example, legal requirements to select participants from minority groups within the country. What are economic considerations for funding and filling vacant positions of those on educational leave? What are the relationships between decision makers at this phase? Do they agree on goals and on educational relevance? What are likely impacts of various factors and decisions on relevance?

**Phase II** represents intervening decisions related to placement of participants in a United States university degree program. The placement contractor is the primary decision maker in this phase, although host country officials can request and must give final approval for placement. University officials also have a decision-making role since they decide whether candidates are qualified for degree programs and whether they have personnel to meet their needs. Contractors and university personnel usually rely heavily on the PIO/P in selecting appropriate programs for USAID-sponsored candidates. As in phase I, participants influence this decision based on their personal interests, contacts, and rapport with other decision makers. So, phase II decisions are based primarily on the development goals, the university's ability to provide training to meet those goals, and the qualifications of the candidate to meet the entrance requirements of the university.

In phase II there is about a 50/50 split in environmental influence between the United States and the home country. The contractors play a unique and critical role in attempting to match expectations from these two environments. The goal is to gain acceptance to a high quality program responsive to the professional needs of the student and the home country goals as outlined in the PIO/P. The desired outcome of phase II is placement of the candidate in an appropriate program. This involves a good match between home country needs; time and support available for training; the participant's skills, goals and needs; and university expertise to meet these needs.

Research questions related to phase II might include questions such as what factors within the university promote international student satisfaction or frustration? What standards for English language, course prerequisites, etc., are appropriate for international students? What evidences of meeting those standards are accepted? How do various university programs compare on student satisfaction, degree completion rates and time lines, demonstrated competency, and student ability to apply concepts in home settings? How well have graduates adapted and applied their knowledge upon returning home?

**Phase III** is very critical since this is where a whole series of intervention decisions are made regarding the participant's training content and process. These decisions create the educational program the participant receives. The primary decision makers are United States university faculty members. This includes the participant's academic advisor, research advisor, course instructors, and supervisors of internship and work experiences. Other university personnel making decisions connected to educational relevance arrange the participant's housing and provide other support and guidance. Participants influence decisions in phase III to the extent they are able to collaborate with other decision makers. Home country officials can also be involved in some decisions, usually through the placement contractor. For example, approval of thesis research, approval to return home to conduct research, and attendance at professional events involve decisions by contractors and home country officials.

Decisions in phase III are based on antecedent variables determined in previous phases. These include: participant performance, degree requirements, development goals and
faculty/advisor understanding of education relevance. Many intervention decisions made in this phase become antecedent variables for decisions made later in the phase. For example, decisions on a research focus influence choice of course work, faculty supervisors, internships, and conferences.

Since decisions are made by stakeholders immersed in the United States environment, their understanding of relevance from the home country perspective is critical. For example, a faculty member with the attitude "if I teach it, it is relevant" may not develop learning experiences that are beneficial to the participant or the needs of the home country.

The desired outcome of phase III is that participants earn a degree respected in academic circles and also gain the skills needed for the job they return home to fill. The degree should be earned within a reasonable agreed-upon time. The time involved, the number and critical nature of decisions made, and the dynamic nature and scope of this phase lend it to major and multiple studies. Research questions related to this phase might include the relevance of the content and process to participant career goals, home country development goals, and technological levels of development projects in the home country. Of interest also are questions related to the participant's satisfaction with the educational process; the participant's ability to adapt to the United States academic system, such as teaching approaches and testing techniques; and the participant's skills in writing and speaking English. On the other hand, questions can be raised about the ability of the university/department to adapt to the special needs of the participant. Such questions could include study of the willingness of university personnel to understand home country needs and to design relevant courses, assignments, special internships or short courses, and research projects to meet these needs. Questions about the cost effectiveness of conducting research in the home country are relevant as are examinations of cooperative arrangements among the university, the contractor, and the home country.

Phase IV represents decisions regarding job placement and support in the home country. Home government officials are often the primary decision makers. The participant has some say in the decision within the confines of commitments made to the government. Under ideal circumstances, the United States faculty can play a role in supporting the participant (for example, as outlined by Pina, 1986, and through USAID mission staff). Decisions in this phase can also be influenced by the economic and political realities in the home country upon the participant's return.

The desired outcome is that the decisions made in the earlier phases of the process will now yield fruit; that is, that the situation the participant returns to resembles what the decision makers had in mind as the training program was planned and carried out through decisions by the various stakeholder groups. Ideally, a well trained participant will have the capacity to adapt her/his education to the situation in the home country at the time s/he returns.

The fourth phase can be thought of as the real test of educational relevance. If participant and supervisor are pleased with the participants' applying skills gained in the United States to the home job, then the process can be rated a success. As suggested earlier, there is more to achieving success than an individual's ability to apply the skills in the home country. Many factors in addition to the participant's education influence relevance. There is a need for ongoing support in terms of appropriate placement, networking, financial support, personnel, and equipment. There is often a need for continued support from the United States educational institution, professional societies, or other professional support.

In phase IV, which can be a relatively long-term phase, researchers can raise questions related to the overall training process. How did decisions in early phases impact later phases? What approaches, methods, or techniques of
collaborating among stakeholders were effective during and between phases? What were the impacts of funding? How well did program monitoring and feedback systems work from participant to advisor, to contractor, to home country officials, and vice versa? What was the impact of antecedent and intervening variables on outcome variables? To what extent did United States education prepare participants to assess work settings and adapt constructive responses? These are just examples of research questions, at a broad level of abstraction, that could be researched for specific training programs.

**Using the Model**

The Decision Process model is designed to help researchers and decision makers more clearly define their specific research or decision-making questions. It recognizes that antecedent variables are in place at the outset of each phase. Some of these variables are static (cannot be changed) and influence the decisions in that phase. For example, gender, age, work experience of potential participants, etc., are static variables. Other variables are dynamic and can be influenced by the process; for example, maturation, apprehension/anxiety, and self-esteem of participant. Research can help us understand the relationships between static variables and educational relevance and how the process can influence dynamic variables that, in turn, can impact educational relevance.

Another important function of the model is to help decision makers and researchers examine relationships among and between the various phases of the process. Since no one researcher can conduct in-depth research on the entire process, the model can help fit current and future research into an overall scheme so that each piece of research can be better understood within an overall framework. Administrators in each phase can collaborate with decision makers in other phases when planning learning opportunities in the United States that prove highly relevant to participants from developing countries. The model presented is tentative and subject to challenge by other practitioners, scholars, and researchers. Its intent is to promote further discussion and research related to educational relevance (Aagard, 1991).

**References**

