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Effect of Training Programs on Work Behavior

Training strategies of international institutes significantly influence the post-training work behavior of participants. Consequently, these strategies also affect programs of the national institutes to which trainees return.

An excellent illustration of the relationship between training strategies and post-training work behavior is found in a recent study conducted by Burton E. Swanson of the International Maize and Wheat Improvement Center (CIMMYT) in Mexico and the International Rice Research Institute (IRRI) in the Philippines.

Swanson identified three training strategies: a *basic research project* approach which trained workers to engage in knowledge-generating activities, a *production strategy* approach which trained workers to communicate technical information to producers but not to train other personnel, and an *on-the-job training* approach which trained workers to develop and improve adaptive production technology.

IRRI Research Training Program: A Research Project Strategy

The IRRI Research Training Program assumes that the major weakness of national rice research institutes is a shortage of competent research workers. IRRI seeks to remedy this situation by providing trainees with solid research experience enabling them to independently design and implement research programs.

The educational objective of the program is the development of the trainee's ability to analyze and to conduct research which will generate new knowledge concerning rice production.

Trainees work closely with an experienced agricultural researcher, participating in one facet of his research and eventually conducting a research project in one disciplinary area under his supervision.

The IRRI program is highly successful in realizing its primary objective, with a large percentage (71%) of its former trainees working in knowledge-generating research activities and publishing technical papers.

IRRI Rice Production Training Program: A Production Strategy

Responding to the acute need for qualified extension personnel, the IRRI Rice Production Training Program seeks to create a multiplier effect by "training the trainers": rice production specialists who will be able to design and implement a rice production training program for extension personnel. They are also trained in analytical skills sufficient to conduct applied research.

Trainees spend half their time in the classroom familiarizing themselves with modern rice techniques. The remaining time is spent in the field integrating this theoretical knowledge with practical training and developing their ability to communicate the new technology to others.

While the majority of former trainees are making use of the training received at IRRI, only a small percentage (12.8%) are working as rice production trainers. One-fourth of the rice production trainees are employing the analytical skills developed at IRRI.

CIMMYT Wheat Training Program: On-the-Job Strategy

CIMMYT's training strategy assumes that the major constraint to the transfer and development of wheat technology is an organizational weakness: the inability of national research institutions to organize themselves to solve technical production problems. CIMMYT focuses on one specific problem—the need for new genetic technology—and seeks to upgrade the research skills of its trainees to a level sufficient for them to design and implement a wheat research program.

The major educational objective of the program is to develop the trainee's ability to *synthesize* available genetic lines in the production of new genetic varieties. At

Each of these Design Notes states a lesson which may be useful to those engaged in planning, managing, or evaluating development efforts, such as technical assistance projects. A given note may describe a technique and discuss its use, may present and explain a useful concept, or report a functional relationship between some intervention and some outcome. Design Notes are backed by cited evidence from PASITAM studies, published literature, or the reports of development agencies.

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same time CIMMYT seeks to develop positive attitudes toward practical application on the part of the trainees by requiring field work and rewarding those trainees who internalize CIMMYT attitudes.

This training methodology develops wheat research manpower and acts as an "early-cut" selection tool for identifying those trainees who will most benefit from their training.

In terms of its objectives CIMMYT is very successful. A vast majority of its former trainees (90%) are now engaged in wheat research or improvement activities of technology-developing character. CIMMYT has been successful in producing trainees who engage in production improvement activities.

CONCLUSION

The character of research training programs significantly influences the post-training work behavior of former trainees and the development and orientation of the national institutes to which they return. A serious constraint on increasing agricultural production is the inability of national research organizations to produce technology aimed at solving local production problems. If the aim of training is field applications, the strategy should emphasize *synthesis* and applied technology development. If the aim is to foster further laboratory work, the training strategy should emphasize *analysis*. International institutes of training and other organizations considering the design and implementa-

tion of training programs should pay particular attention to the needs of the environment to which the trainee will return. They must be particularly conscious of the influence their training objectives and methodologies will have on the post-training behavior of their students.

Source: Swanson, Burton E. "Training Agricultural Research and Extension Workers from Less Developed Countries." Ph.D. dissertation, University of Wisconsin, 1974.

For further information see:

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