

Water Management REVIEW

Vol. 1, No. 1

Fall 1985

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First National Training Conference, Pakistan, Emphasizes Systematic Planning and Curriculum Development

by
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Training directors from all parts of Pakistan met in a national conference in 1984 to discuss ways to coordinate training efforts in on-farm water management by establishing a national coordinated policy for on-farm water management training and curriculum development. The conference focused strongly on training trainers who could become a cadre of well-qualified professionals by receiving up-to-date, interdisciplinary training in on-farm water management. The conference set committees to study appropriate curriculum development for such training based on current needs and the technical skills required of field teams working on new projects. This effort to coordinate training nationally emerges from almost ten years of developments in on-farm water management, primarily through USAID-funded programs at Colorado State University.

Establishing the On-Farm Water Management Training Institute in Lahore during the mid-1970s was a tremendous step forward to providing interdisciplinary training in precision land leveling and watercourse construction. Though water management is featured in the title of this government project, irrigation agronomy; rural sociology related to establishing water user associations; management concepts related to record keeping, organizing human groups and leadership training; and other related areas have received less emphasis during the Institute's development.

In the last decade in each of the provinces of Pakistan — the Punjab, Sind, Baluchistan and Northwest Frontier Province — more and more watercourses have been constructed. More than 38,804 acres of land belonging to farmers has been leveled; the majority of which lies in the Punjab. It has become evident through this time that each irrigation construction project requires more field staff who need training.

A recent government decision requires that 3,000 extension field assistants take a course in on-farm water management at the Institute in Lahore during the next three years. This puts tremendous strain on the trainers at the Institute as only approximately 40 students can receive

training at a time in a six-week course. This course includes practical training in land leveling, surveying, watercourse engineering, irrigation agronomy, and social/management concepts. Trainers and institute faculty will have to be more versatile than ever before in order to provide short-courses in water management to professionals of the Directorate staff, to sub-engineering groups, and to field assistants, as well as to the new group of extension personnel.

In the Northwest Frontier Province, Sind, and Baluchistan, there is a growing need to train more field teams in water management. Training is complicated by the lack of well-developed, formal training institutions in these provinces. Rather, on-farm water management Directorate staff have attempted to provide practical training whenever their administrative duties allow. Much informal training has occurred in the field in conjunction with watercourse construction. As the need has increased, the relative efficiency and efficacy of training per se has decreased. Trainers who received training under a USAID program during the seventies have retired or have been promoted or transferred to other departments in the Food and Agriculture Ministry. Trainer turnover has been high. Yet, more and more people need training. It has become evident that coordination and cooperation are vital.

The first National Conference for On-Farm Water Management Training held at Lahore recognized that training people to meet changing needs on thousands of miles of new watercourses will require much effort. Various funding agencies now sponsor irrigation system programs — the World Bank, the Consortium for International Development, the Asian Development Bank, Tate and Lyle Project, USAID, and the Government of Pakistan. Agency contributions have expanded with expanding need, but watercourse conveyance losses of almost 40% continue to be a national problem. Irrigation channel construction is only a partial answer. The farmers need to be informed about better irrigation practices and helped to understand how to use the water more effectively when it reaches their fields. This requires training and trainers to educate the field teams. The task ahead is huge.

The Conference discussed new system approaches in technical training and the need for an interdisciplinary training model (Figure 1).

Designing a training system for a technology such as irrigation water management requires attention to a process that is logical, holistic and contextual. Systems thought requires a conscious process of reflection and is systematic in that it is methodical, coherent, designed and analytic. It is

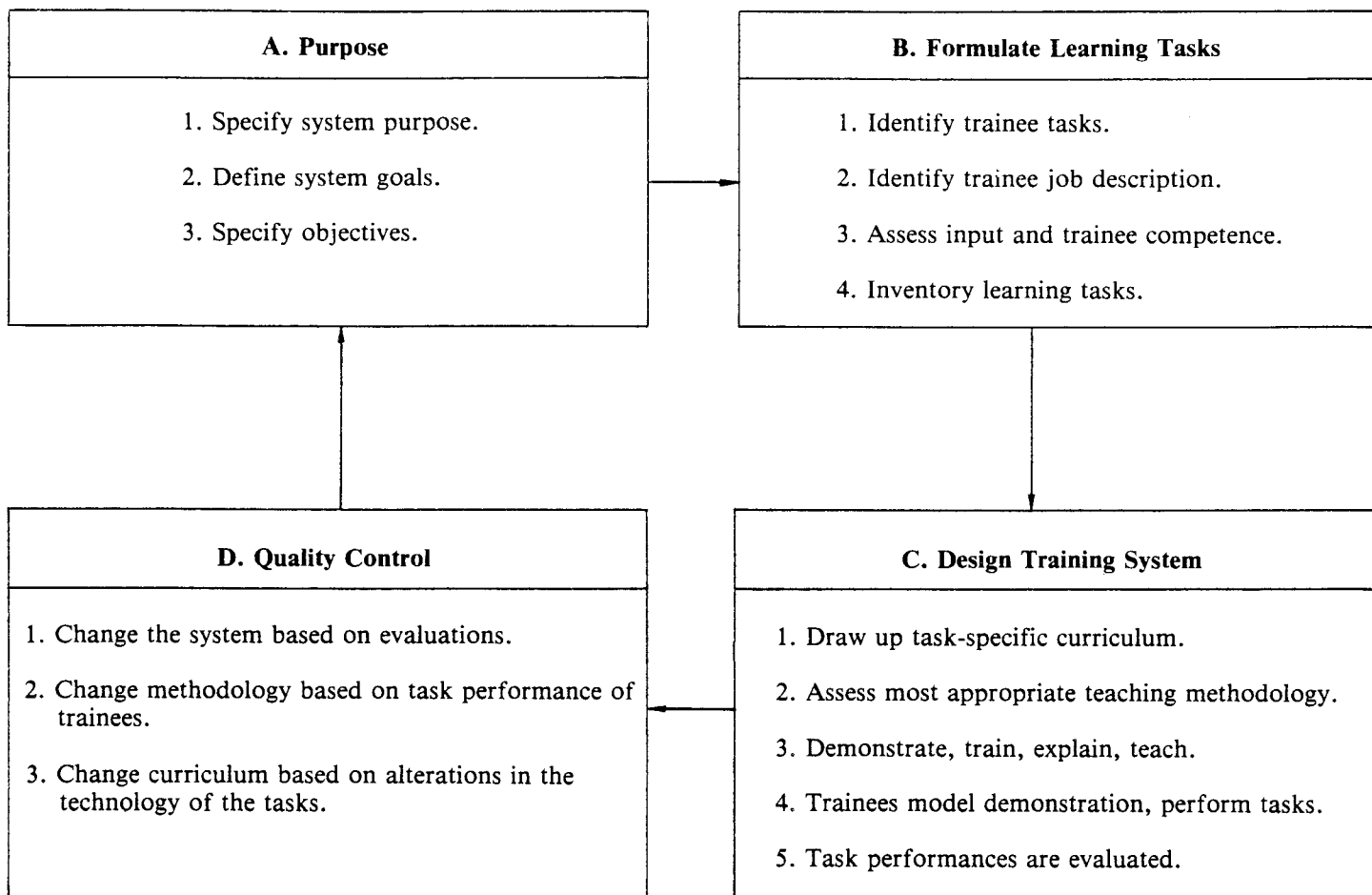


Figure 1. Technical training systems model.

relational; that is, it accounts for referents, connections, interconnections and direction from all the representative disciplines — engineering, water management, irrigation, agronomy, rural sociology and technical/vocational education.

What does this mean in regard to on-farm water management training? The entire training program to be established will relate to referents of tasks to be performed by trainees, their job descriptions, and their function in a larger interdisciplinary system. Thinking this way reverses the usual curriculum development process, which begins with an expert listing what he thinks trainees must know; i.e., theoretical knowledge. A systems approach requires initial reflection about the entire system, its process, its structure and its intended outcomes. The system works to

carry out the tasks. Training and curriculum are designed to meet the system's goals.

During the two-day conference, major concerns were discussed and important decisions were reached. The following agenda items provide an overview of their work.

- Establish a joint planning unit.
- Initiate interagency and interdisciplinary coordination.
- Establish a unified curriculum.
- Establish standard job descriptions for trainees.
- Establish training targets in a systematic fashion

It is hoped that the efforts to improve and coordinate training and curriculum development will enhance the existing success in on-farm water management in Pakistan. ■
