

## **CHAPTER 3**

### **BACKGROUND TO HRDC TRAINING PROGRAMS**

#### **INTRODUCTION**

Agricultural adult education activities in Sri Lanka were recorded as far back as 1880 (Mel, 1980) even before the Department of Agriculture (DOA) was set up. But they were not always recognised as such. Before the formal training system was introduced, people learnt how to fulfil their personal and social tasks mainly by their own experience and from their neighbours. It was thought that farming did not require education and training except in the informal transmission of skills from father to son. Since the 1950s, however the teaching of agricultural sciences and their applications to the production process have become important.

The main agricultural activities of the DOA were recognised in the 1970s with the implementation of the new policy on agricultural "Lands and Law," and the agricultural "Productivity Law" which transferred the responsibility of production to a great number of small-scale farmers. This necessitated the expansion of training activities in the DOA to provide the necessary technical back-up for extension officers, farmers,

and others interested in farming. For effective operation of these activities in the field of agricultural education, the new Division of Education and Training was established in 1975.

During the last two decades, the training staff have re-defined goals, and revised subject matter and training methods to cope with the problems of economic development of the country. The methods of training have drastically shifted from learning by rote to practical orientations and problem solving. The purpose of this change was to train learners to develop observation powers and acquaint themselves with cultivation practices and problems in the vicinity. Within the last five years, the Education and Training Division accepted the additional responsibility of developing technical staff to meet the increasing demand for more effective agricultural practice.

In 1990, the DOA was reorganised. The management structure and names of the divisions of the DOA were changed, but the roles and the functions of the divisions remain as they were. After the reorganisation of the DOA, the main adult education provider - Education and Training Division - was renamed as the Human Resource Development Centre (HRDC). Therefore, since 1990, the HRDC has been the main training provider of the DOA (Appendix 3).

## **ROLE OF THE HRDC**

The HRDC is the main organisation which provides training for Department of Agriculture staff, for the other departments and institutions involved in agricultural activities, and for the farmer leaders

and progressive farmers. Therefore, the core objective of the HRDC of the DOA is to plan and improve human resources for agricultural development.

## **PURPOSES OF THE HRDC**

The HRDC is playing an important role in accelerating the agricultural development of the country through:

- providing scientific and practical agricultural training at diploma and certificate levels to school leavers who wish to engage in agriculture
- training staff of the DOA and staff of the other organisations for improving job performance and competencies.
- providing training for farmers, school leavers, and other interested groups.

The HRDC performs these functions by maintaining three Schools of Agriculture (SA), eight In-Service Training Institutes (ISTIs), and twenty District Training Centres (DTCs) (Appendix 4). Of these training centres, In Service Training Institutes are playing a major role in updating and sharing the agricultural knowledge and skills of officers of the DOA and officers of other agricultural related organisations.

## **PRESENT SITUATION OF ISTI TRAINING PROGRAMS**

Updating and sharing agricultural knowledge and skills of officers of the DOA and agriculture officers of the provincial councils is the mission of the ISTIs of the DOA. Therefore these institutes have to provide additional knowledge and skills required by officers of the DOA and agriculture staff of the provincial councils for improving their job efficiency. For this purpose the HRDC maintains eight ISTIs one located in each major agro ecological region (Figure 3.1).

The main target audience of the ISTIs are the officers of the DOA. These Institutes also provide training to farmer leaders, and other progressive farmers. Other government organisations could avail themselves of the training facilities, providing the training content is within the DOA's mandate crops, such as rice, vegetables, fruits, other field crops, and objectives. Training programs invited by the DOA are conducted free for all DOA officers, including provincial DOA staff.

The officers are provided free board and lodging in lieu of subsistence allowance. The other government agencies and non-governmental organisations requesting training have to pay for their services. Each of the ISTIs is headed by an Assistant Director of Agriculture Training (ADA/Tra.).

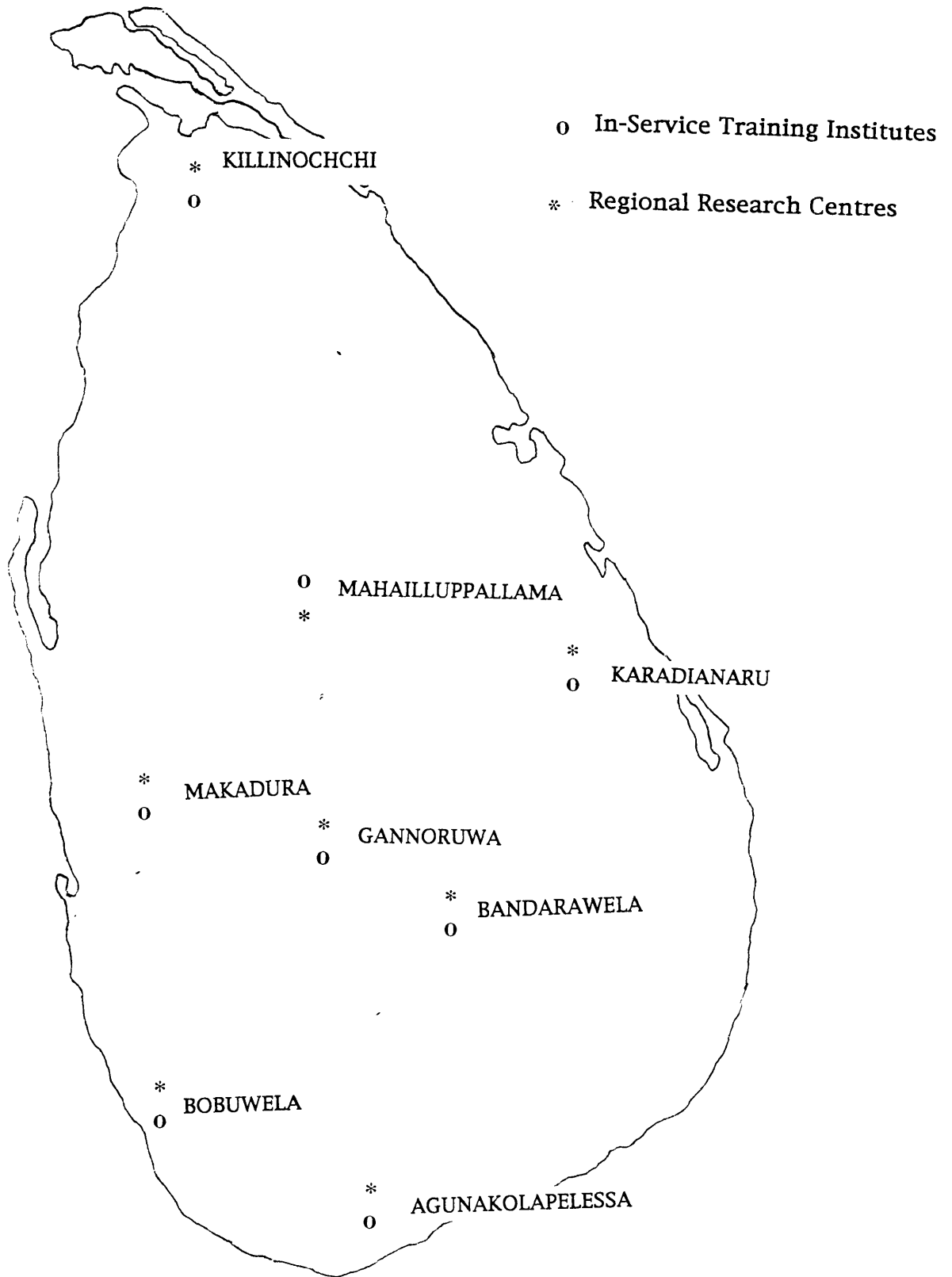


FIGURE 3.1

LOCATIONS OF REGIONAL RESEARCH CENTRES  
AND IN-SERVICE TRAINING INSTITUTES  
IN SRI LANKA

ADAs are either graduates in agriculture or senior officers who have a diploma in agriculture with considerable experience in the field of extension. Under each ADA there are training staff, field staff, and supporting staff. The training staff consist of Subject Matter Specialists (SMS), Agriculture Officers (AO) and Agriculture Instructors (AI). SMS's are graduates in agriculture, and most of them have practical experience in the field of extension. AO's and AI's are diploma holders in agriculture and have considerable experience in the field of extension. The field staff consists of a farm manager, farm mechanical instructor, and field technical officers. There are also clerical staff and the secretarial officer in the supporting staff (Appendix 5).

### **THE TYPES OF TRAINING PROGRAMS OFFERED**

The effectiveness of the technical and non technical officers of the DOA depends on sound in-service programs and the availability of current information from research and other sources. There is also increasing demand for training of staff from other departments and agencies. Therefore ISTIs offer various types of training programs and they are categorised under the following main areas.

- Subject Matter Training
- Problem Oriented Training/ Pre-seasonal Training
- Management & Induction Training
- Workshops and Seminars

## **Subject matter training**

Extension officers as well as non technical officers need periodic training to update their knowledge and skills. Therefore, additional in-service training programs in different disciplines are conducted during the season to meet any deficiencies. Specialised courses are also conducted for field extension officers in the production of rice, other field crops, vegetables, plant protection and soil and water management. These long-duration training courses have been given to the AIs selected to be appointed as SMOs. This kind of specialised course last for two to three months and the training is provided at one or two in-service training institutes, depending on the availability of the facilities and personnel to conduct the training.

## **Problem oriented training / pre seasonal training**

In each of the eight agro ecological regions the extension staff receive three to five days pre seasonal training from both the research and training staff at the regional ISTIs before the beginning of the cultivation season. This training is provided to meet the training needs identified each season by a meeting called the Regional Technical Working Group (RTWG). Most of these training programs are residential and practical oriented. To make this training more field oriented the identified training needs are demonstrated in the field, and the trainees get an opportunity to practice new skills during the training. These courses have now been systematised, with the first and third quarters of the year devoted to pre-seasonal training and rest of the year to special courses to meet

supplementary needs. Attendance at pre-seasonal courses has also been made compulsory.

### **Management and induction training**

Management and induction training programs are organised to orientate new recruits to the DOA. It aims to make them familiar with the organisational set-up of the DOA as well as its objectives and policies. Some aspects of agricultural extension, research, communication, and management procedures are also included in these programs, to enable them to understand their roles and functions as members of the DOA.

### **Seminars, workshops and conferences**

As an adult education provider, the ISTIs from time to time organise seminars, conferences, and workshops at the district, regional, national and international level, at these institutes. They help to broaden, as well as sharpen, the knowledge and understanding among the participants who are mostly DOA officers. At present training programs are conducted depending on the needs of the districts and the locality and the type of groups. Officers in charge of the ISTIs are responsible for planning training programs in consultation with the relevant organisations.

As an example of the types of the programs conducted by ISTI, a summary of the training programs conducted at ISTI, Gannoruwa, in the first quarter of 1995 is presented in appendixes 6 and 7.



## **TRAINING PROCESS**

As discussed earlier, the main objective of the programs organised by the ISTI is to improve learner skills and knowledge in the performance of their jobs so that they become more productive and effective members in their society. Therefore the aim of the in-service training is to increase the knowledge and skills in matters related to jobs; to improve performance; and to instruct personnel in additional strategic approaches. Training situations in these programs involve transference of knowledge or skills, aiming at an eventual voluntary behavioural change in the learner. Other than that, in-service training programs help to impart practical knowledge and problem-solving skills to the learners.

Many of the problems of training arise because the typical training unit has a distinct lack of knowledge of the training process. Looking at the training process, one can see it as a set of interrelated and integrated components forming a system. To coordinate all these components requires first focussing on the training and the performance required of the officers in a particular course, and then making decisions about the course content and choice of media and method in order to reach a specific measurable goal.

Though there is a systematic way of planning training programs, most of the trainers in ISTIs do not pay consideration to planning training programs in a systematic fashion. At present most of the trainers first determine by themselves the subject matter to be taught, arrange it to fit a timetable, and then announce the schedule to the trainees.

The general principle of the previous training model was that learning can only take place through the active participation of the trainees. It is what the trainees do that is learned, not what the trainer does. Trainers who followed these principles were very difficult to find. In most of the training programs the traditional trainer-centred approach was followed whereby all subject matter was prepared in advance with little room left for the individual needs of trainees.

### **THE TRAINING MODEL**

To overcome the earlier training problems, in 1992 the new training model was introduced by the HRDC. Figure 3.2 outlines the training model with the elements of the training process arranged in a logical sequence. This training model was designed by Moss (1988), based on experience of working in ten Asian and Pacific countries. The model has three main phases: planning, preparation, and presentation. The first tasks in the planning phase are to analyse the job requirements, carry out trainee analysis, and decide on their training needs. After that trainers are able to determine the training objectives. The second phase of the training model is devoted to selecting the content of the course and training methods, preparing lesson plans, and planning evaluation. The tasks of the last phase of the training model are conducting training, evaluating training, and reviewing and revising the training. When this systematic training model was brought in, the approach to training was given an analytical footing so that every step in the process, from need identification to training evaluation, was formally planned and the whole course was developed into a documentary form.

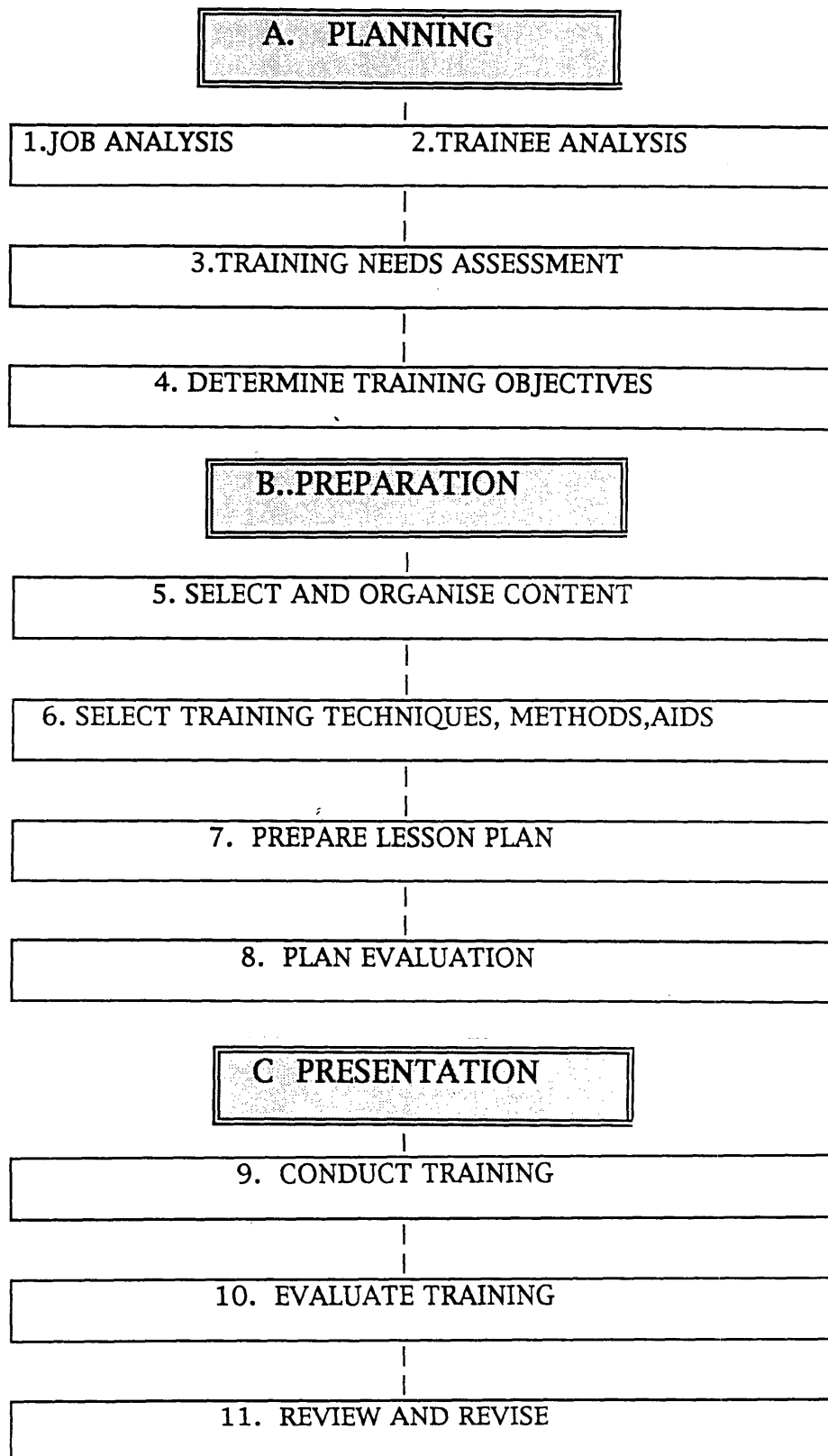


FIGURE 3.2

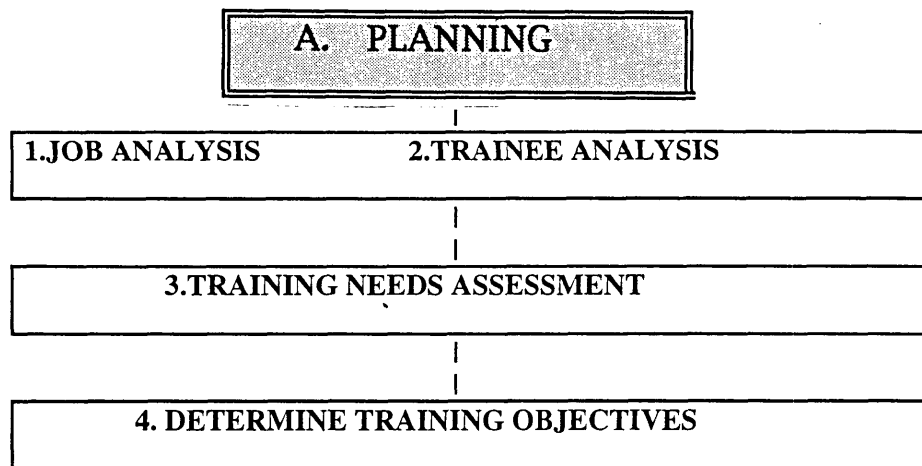
THE TRAINING MODEL INTRODUCED BY THE HRDC

## **PROBLEMS ENCOUNTERED WITH THE IMPLEMENTATION OF NEW MODEL**

After introducing the new training model there has been some improvement in the training programs, but it is not up to the expected level. Most of the trainers have concentrated on preparing lesson plans and training aids rather than giving equal priority to all the phases of the training model. There are still criticisms of the ineffectiveness of the training programs and extension officers have not been as effective as had been hoped. This appears to be because of problems with the implementation of the model and not with the model itself. Therefore it is necessary to examine each phase of the training model separately, in order to identify the problems.

### **PROBLEMS IN PLANNING PHASE**

The initial step of the first phase in this model is to prepare a description and analysis of the job or skill that the potential participant will be expected to perform when they complete the course. This provides the instructor with a clear picture of the real situation in which the learner must operate after receiving instruction. The second step in the planning phase is to describe as completely as possible the adult who might participate in the training program. This involves the probable number of participants as well as their characteristics. After completing the job analysis and trainee analysis, trainers are then able to determine the training objectives (Figure 3.3)



**Figure 3.3 Planning Phase**

Unfortunately this is not happening at present. Trainees' characteristics are not considered, and training needs are not identified methodically. Most of the training needs are identified by higher officers without consulting clients. It is therefore obvious that the learning process did not originate at the recipient level on his or her request. The identified need came from the top to the bottom.

The last step in the planning phase, derived from the earlier steps, is the formulation of the training objectives. This is essentially the expected observable change in the performance of the trainee as a result of training . But at present these objectives are not clearly defined. As a result the training content is often unreliable and irrelevant to the needs of the trainees. Therefore the entire program may be a wasteful exercise.

## **Trainee analysis**

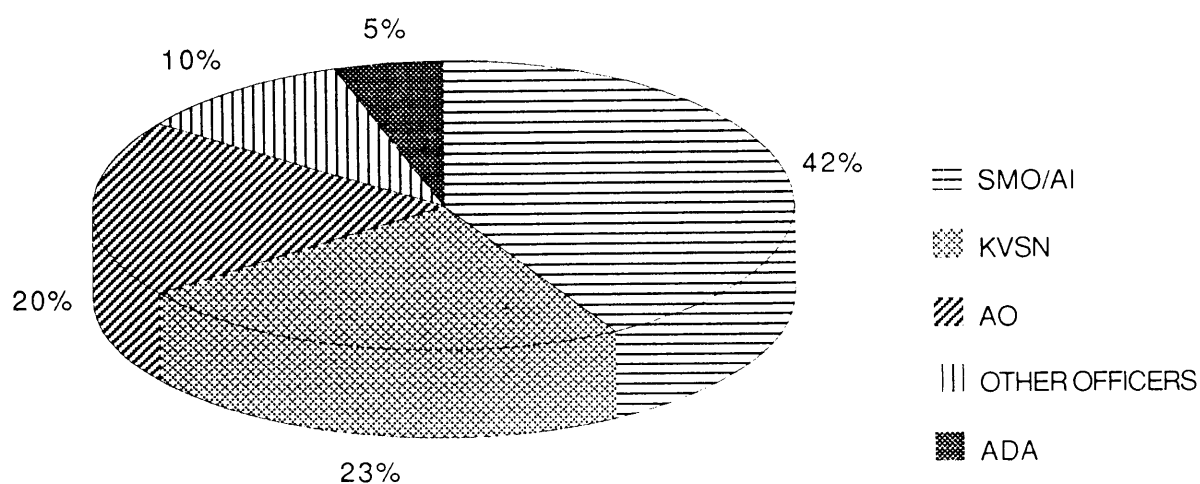
Any learning situation is influenced to some extent by the nature of the learner. Therefore, it is very important to examine the characteristics of the learners who participate in the training programs organised by the ISTIs of the DOA. The biggest target group of the in-service training provided by the ISTIs is the officers of the extension division. Field level extension personal such as Krushikarma Viyapthi Seva Niladari (KVSN), Agricultural Officers (AO), Subject Matter Officers (SMO) and Agricultural Instructors (AI) are given in-service training largely by the staff of the ISTIs. This training would serve both as refresher courses for the extension staff and also as a means of transferring new research information and technologies to the extension staff for updating their knowledge and skills. The total number of staff of the extension division that have to be serviced by ISTIs at preent are given in table 3.1

<b>DESIGNATION</b>	<b>NUMBER</b>
<b>Assistant Director of Agriculture (ADA)</b>	<b>38</b>
<b>Agricultural Officer (AO)</b>	<b>95</b>
<b>Subject Matter Officer (SMO)</b>	<b>527</b>
<b>Agricultural Instructors</b>	<b>231</b>
<b>Krushikarma Viyapthi Seva Niladari (KVSN)</b>	<b>2307</b>
<b>TOTAL</b>	<b>3198</b>

**Table 3.1**

**STAFF OF THE EXTENSION DIVISION 1996**

There is also increasing demand for training of staff from other divisions of the DOA and other departments which are related to agricultural development. Therefore technical and non technical officers are also part of the target group of the ISTI. The percentages of the various categories of the officers trained in 1990 at one of the eight ISTIs, Gannoruwa, are shown in figure 3.4.



**Figure 3.4**  
**Different categories of the officers trained at ISTI Gannoruwa in 1990**

As discussed earlier, the target group of the ISTIs is mainly adults. Adult education is significantly distinguished from other forms of educational provision by reference to the nature of its clients. Unfortunately training program organisers of the ISTI do not consider the characteristics of their learners. For example, for the most part, our institutions do not take into consideration the physiological differences of adult learners.

Many trainers use dirty chalk boards-boards from which the chalk dust has not been removed; or messy chalk boards with miscellaneous materials which make it difficult for the adult learner to centre attention on the particular task at hand; or writing that is too small and can not be seen clearly. This last problem may directly affect the teaching - learning transaction because the adult learners may not clearly see what is on the board.

### **Identification of training needs**

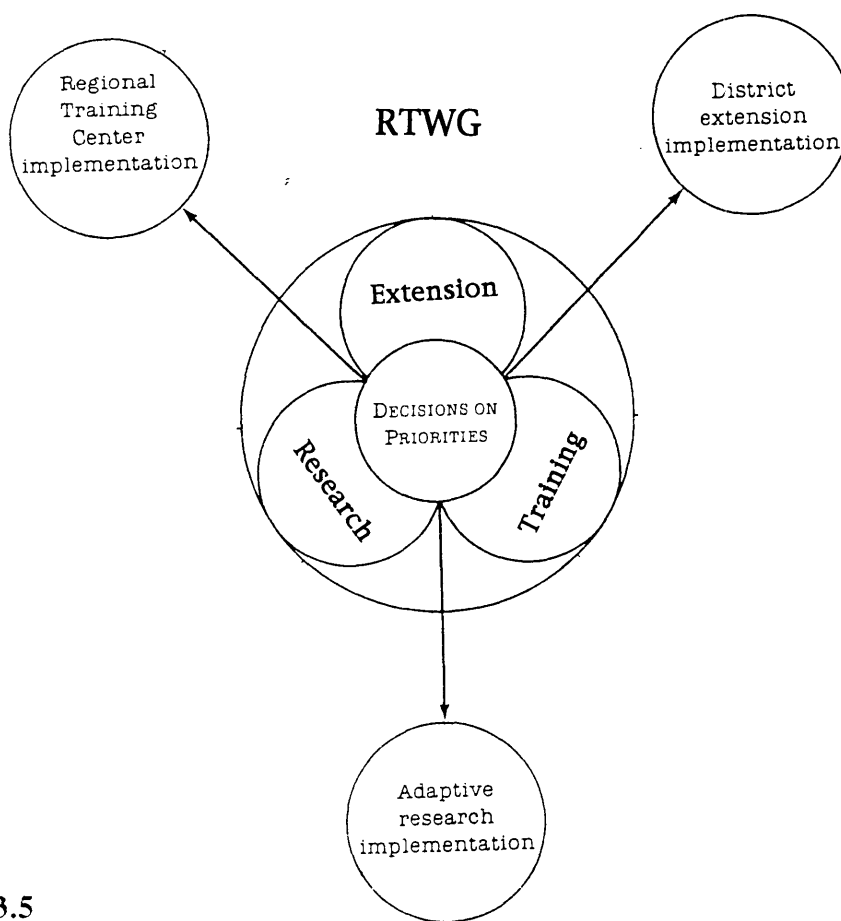
Of all the training activities, the training of field workers is the most critical one. Therefore the main concern of the ISTIs is to build the professional competence of the field staff. Basically all level of the field staff require regular and systematic training in subject matter which is relevant, profitable and timely. In addition different groups require further training; for instance SMOs require in-depth training in their subjects; supervisory officers require training in supervision and management, and so on.

To be effective, these training activities should be based on identified training needs. Training courses should be formulated to meet these needs and thereafter implemented and evaluated for their effectiveness. At present most of the training courses are planned on the training needs identified each season by the Regional Technical Working Group (RTWG). In each of the agro-ecological regions as explained earlier, there is a Regional Research Centre (RRC), and a In-Service Training Institute (ISTI). These are linked with extension by the RTWG, which include the staff of the RRC, staff of the ISTI, and the senior extension



staff of the region. The group will also include representatives from other divisions of the DOA.

At the RTWG meeting research, extension, and training programs of the past season are reviewed. Later, the problems identified by extension officers in the current season are presented and discussed. The last stage in the deliberations of the meeting is to decide the extension targets, research program and training needs for the on coming season. A flow chart describing these activities is shown in figure 3.5.



**FIGURE 3.5**

**FLOW CHART FOR THE PLANNING AND PREPARATION OF TRAINING,  
EXTENSION AND RESEARCH PROGRAMS**

**(RTWG: Regional Technical Working Group)**

Once these training needs are identified, the task of the ISTI is to formulate the pre-seasonal training programs for all levels of field staff. While the pre-seasonal training looks after the stress points for the season, experience has shown that additional training is required to make the extension officers more competent and confident. They require further training in subject matter as well as extension methodology.

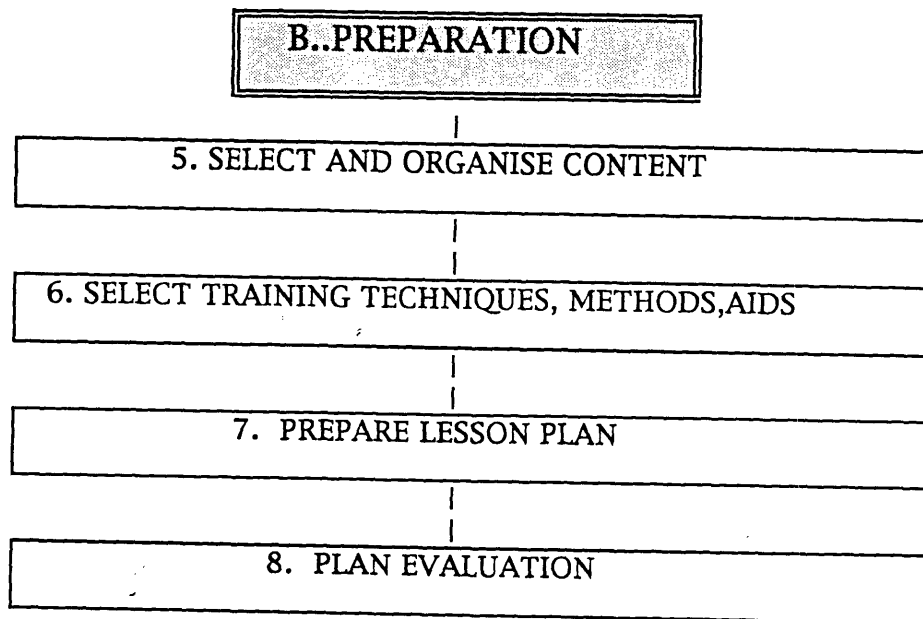
These training needs are identified during the season by the supervisory officers, and then translated in to short duration training courses at the ISTIs, using specialist officers from extension, research, and training divisions and, at times staff from other agencies.

These training needs are decided at the RTWG meeting by the senior extension staff of the district. But the grass root level field officers do not know of these training needs or the skills that they should develop or strengthen until they come for pre-seasonal training. Therefore trainee analysis and needs assessment should be carried out well before training objectives are written. But the majority of the trainers think that these are not their responsibilities. This mostly happens in the ISTIs because most of the trainers in this institutes have not been trained in adult education practices, and have got into the habit of planning their training programs in the old fashion.

### **PROBLEMS IN PREPARATION PHASE**

Out of the four tasks of the preparation phase (Figure 3.6), the main problem that has emerged is in the second task: selecting training methods and techniques. The first task in this phase is deciding on the

content of the course. This should cover the detailed knowledge, skills, and attitudes required on topics that support the objectives. When selecting content, trainers should remember the purpose of the training, and put the content in logical order or sequence. Certain parts of the content will have to be understood before other subjects can be introduced.



**Figure 3.6 Preparation Phase**

When the content of the training course has been selected, classified and arranged in suitable order trainers can then decide on the training methods. But at present priority is given to only some of the steps in the preparation phase of the training model. Trainers tend to select the subject matter they feel more comfortable with, without considering the needs and the desires of the adult learners. They prepare lesson plans with training objectives and time allocation for each of the content areas

(Appendix 8), but most of the objectives written in these lesson plans are not in measurable terms. Some of these objectives would not describe what trainees should be able to do at the end of their training that they could not do previously.

### **Training methods**

The second step of the preparation phase is deciding on the training methods to use to make training effective. There is a wide variety of training methods, but the trainer should understand the particular characteristics, purposes, advantages, and disadvantages of each method in order to choose the most effective method. The teaching method of any training program is likely to be determined by the aims and the objectives of that particular learning situation, and the nature of the clients. Trainers must therefore clarify precisely what learning they want the students to achieve.

It is often claimed that the training programs offered by the ISTIs are too theoretical and not designed to solve practical problems. This method of teaching is only a content method, subjective in nature, and not designed to achieve an objective. Subjective training of this nature will bear only minimum or no fruits at all in the end because here the teaching-learning process is not successful.

In most of the ISTIs the teaching methods vary according to the subject or course, but the predominant ones are lectures, discussions, demonstrations and field work or practical. But still there are some

trainers who mainly use the lecture method which is one of the more inefficient methods of teaching.

We know that there are various teaching methods, but each of these methods requires particular skills of the facilitator and the learner in order to be successfully applied in the teaching learning-process. But in our institutes many trainers do not have evidence of the effectiveness of other approaches. Most of the trainers in ISTIs have not been trained in adult education practices. So they have no confidence or experience in using various teaching methods which will influence the teaching-learning process.

### PROBLEMS IN PRESENTATION PHASE

Out of the three tasks in the presentation phase (figure 3.7), problems are encountered mainly in the first and second tasks.

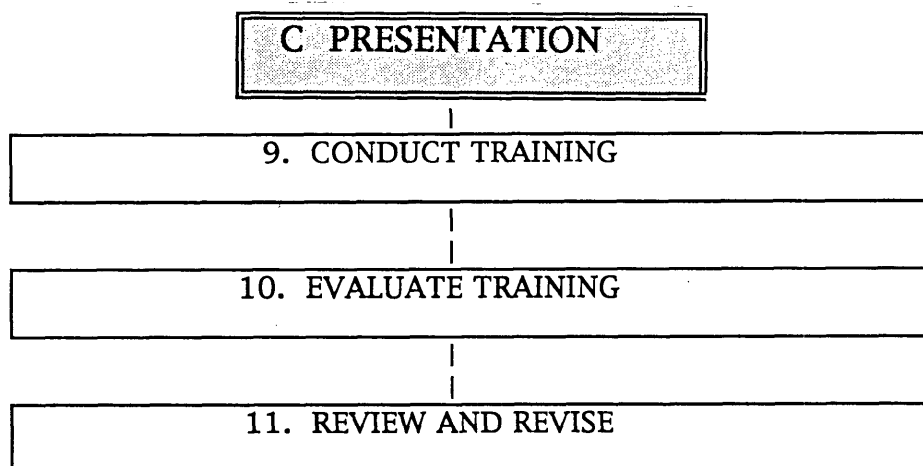


Figure 3.7 Presentation Phase

The success of the first task, conducting training, is influenced by a number of factors, including the choice of selecting methods, as discussed above. Other important factors are the context, the characteristics of the learners, and the characteristics of the trainer (Clark,1987).

The context in which the ISTIs operate, and the nature of the participants in the courses, have been discussed earlier, so the focus here will be on the characteristics of the trainers.

### **Characteristics of the trainers**

In any teaching learning transaction, one of the most important factors is the trainer. Trainers' effectiveness in guiding the teaching learning transaction can be greatly influenced by their content mastery.

As discussed earlier, each ISTI is headed by an Assistant Director of Agriculture (ADA) and under the ADA there are four to five trainers comprised of Subject Matter Specialists (SMSs), Agriculture Officers (AOs) and Agriculture Instructors (AIs). SMSs are graduates who completed a four year course at university, and AOs and AIs have undertaken a two year diploma course at the School of Agriculture. The trainers who attached to the ISTIs are full time trainers and most of them have residential facilities close to the training institutes.

The ADA is responsible for initiating, planning, developing, and carrying out training with the help of the other trainers. As officer in-charge of the training institute, ADAs deal with a broad range of tasks: staff and trainee management, management of physical and financial

resources, management of the institution's farm, monitoring and evaluation of training programs, and a host of varied and minor, but urgent day-to-day problems.

The present number of trainers at each ISTI is inadequate to handle the large number of training areas now introduced in to ISTIs with the decentralisation based on agro-ecological regions. Due to the lack of trainers each trainer has to handle more than one subject area at present.

The Department of Agriculture generally fills vacancies of the trainers from those who have recently graduated from the university or schools of agriculture. Although the trainers are SMSs or AIs and have an extensive background in the subject area, they have very limited knowledge and skills in adult education. Table 3.2 presents details of the present staff strength of the ISTI and levels of training of the main categories of staff. The quality of staff depends on the level of training of staff and the experience gained in the respective areas of expertise.

<b>Post</b>	<b>No</b>	<b>No. Trained at Post Graduate Level</b>
ADA	7	2
SMS	22	6
AO	4	-
AI	20	-
KVSN	21	-

**Table 3.2 MAIN CATEGORIES OF TECHNICAL STAFF OF THE ISTI**

It appears that in respect of the trainers the percentage of staff with training at the post graduate level is relatively low. The figures compiled for all graduate staff of the divisions of research, extension, and training are given in Table 3.3.

<b>Division</b>	<b>No. of Graduates</b>	<b>No. Trained at PG Level</b>	<b>%</b>
<b>Research</b>	<b>237</b>	<b>152</b>	<b>64.1</b>
<b>Extension</b>	<b>55</b>	<b>34</b>	<b>61.8</b>
<b>Training</b>	<b>90</b>	<b>37</b>	<b>41.1</b>

**Table 3.3**

**TOTAL NUMBER OF GRADUATE STAFF AND NUMBERS TRAINED AT POST GRADUATE LEVEL IN DOA**

As indicated in Table 3.3, of the three main divisions of the DOA where graduates are employed, HRDC has the lowest percentage of trained personnel. Management of the HRDC assumed that the participants and techniques used in the education of children would be equally effective in helping adults to learn. People were therefore recruited from the universities and other institutes without being given any training in adult education. Therefore most of the facilitators in ISTI work on their own, without considering adult education principles. This directly affects the teaching - learning process of the training programs organised by the ISTIs.

The self concept of the trainers in our training institutes are generally negative, or sometimes depressed. Therefore they respond inflexibly or



defensively to the learners, thereby increasing trainees' stress and anxiety.

### **Evaluation of training programs**

Evaluation is the process of continuously determining to what extent the training objectives are actually being realised. The performance objectives should serve as criteria for evaluation. The information collected in evaluation is used to judge the appropriateness and effectiveness of instruction, to modify and improve the course, to make decisions about the practicality of course and the effectiveness of instructors.

This most important step is rarely adequately carried out. At present training evaluation is one of the most hotly debated activities in the DOA; among trainers it is one of the most ignored. Many trainers are of the opinion that evaluation is some thing which is done only at the end of the training programs. In most cases only trainees are evaluated, and not the trainers. Some times the wrong aspect of the training is evaluated. Several factors have contributed to a persistent lack of evaluation of training programs. Some trainers hesitate to evaluate, either out of fear of the result or because they do not feel they are competent to conduct an evaluation.

At present no formal evaluations are conducted to study the impact of the training programs, but follow up field visits, discussions and observations do give trainers good evaluation and information for decision making.

Occasionally pre or post evaluation has been done for a few training programs, but no systematic data collection and analysis have been done.

### **OTHER CONSTRAINTS IN THE TRAINING SITUATION**

The primary objective of the agricultural development policy of Sri Lanka is to increase the production of major food crops including rice, vegetables, fruits, green legumes and condiments. These come under the food crops component of domestic agriculture, and also within the preview of the DOA. According to this policy, the ISTI of the DOA cannot offer in - service training programs on animal production, plantation crops such as tea, rubber, coconut, and minor export crops such as pepper, cloves, coffee. But the farmers grow all the crops which they can grow, and also rear some animals.

Therefore, the grass-roots level extension officers face a problem in giving technical advice in these areas because they do not have training in that areas. Although there is a demand for such training programs, departmental policy does not allow it to be offered. This directly influences the learning environment of the HRDC programs.

Among the constraints there is another important factor which negatively influences the training learning transaction: the learner's subsistence. In - service training programs organised by the ISTI are provided free of charge to all DOA officers. They are provided free board and lodging in lieu of a subsistence allowance.

Most of the officers do not like this policy decision because the total cost of meals and lodging is less than their daily allowance. So there is no incentive for them to participate in-service training programs. This also creates another problem in management. At the moment, the officers in charge of these institutes have to allocate more than fifty percent of their time to hostel management. As technical officers they could make better use of this time for training activities if they could be relieved of the burden of hostel management.

Another important factor is that there is no post training support in the department. The participants (trainees) after return to their work place need to be provided with the necessary support to utilise their training effectively. The support may also ensure that the participants are able to utilise what they have learnt. But in our organisation post training support is very rare. Normally DOA gives them an entirely different role from what they learnt during the training. This may result in wastage of training and de-motivation of the employees.

Selection of the trainees for the in-service training programs is another factor that affects the teaching - learning transaction. Usually when people in a work organisation come to know about a training program they depute some persons who they think need the training. This approach is a very simplistic one and does not lead to effective use of training. Very little attention is paid to the questions as to which officers have critical roles and might benefit from this training, and who should be trained subsequently to make effective use of training.

Trainers face constraints with regards to time, finance, enrolments, facilities, and materials available. This may have a very direct impact on the learner's attitude to the providing agency and in turn, the teaching learning environment. This situation occurs in ISTI programs. Unfortunately training is given a low priority in Sri Lanka because its potential benefits are not understood. Therefore, the capital and recurrent funds allocated to the training institutes are very low. So the main contextual factor that affects the learning environment is financial constraints.

As agricultural training centres, the ISTIs should own a farm for use as an outdoor laboratory. The farm must be first and foremost a teaching aid. But due to the financial constraints, most of the training centres do not maintain a training field. Another reason for this is that many central administrators undervalue the role of institution farms as teaching aids. As a result, many institution farms appear to be under-utilised; they may be a bad example of farm management, and reduce the institution's credibility. This may have a very direct effect on the effectiveness of the training.

If a training institution is to contribute significantly to the progress of the society and the educational system with which it is associated, as well as to the learner's progress, it must provide a favourable climate for its full and continuous development. Therefore the contextual factors discussed above are very important for institutional development, as well as the learning environment.

## **PROBLEMS ENCOUNTERED IN PRESENT TRAINING SITUATION**

By analysing the present training situation of the ISTIs the following short-comings could be identified.

### **a) Problems encountered in planning phase**

- Learners' characteristics are not considered in planning.
- What is taught to the learners may not be relevant to their work.
- Training objectives are not clearly determined.

### **b) Problems encountered in preparation phase**

- Training methods/ techniques are not always appropriate to the objectives

### **c) Problems encountered in presentation phase**

- The way of conducting training is not appropriate to the learner.
- Inadequate motivation of learners to the learning process.

It is clearly shown that these problems have not emerged because of the newly introduced training model itself but due to the way of implementing the new training model. Therefore it is necessary to use the present training model as a framework and to find out solutions for strengthening the implementation of that model.

## **SUMMARY**

An attempt has been made in this chapter to describe and examine the present situation of the in-service training programs with special reference to the implementation process of the training model. By analysing the present training situation of the in-service training programs, it appears that the trainers of the ISTIs do not apply generally accepted adult learning principles, which were identified in chapter two, to any stage of the training model. Therefore the main problems pertaining to the present training situation have not emerged because of the training model, but due to the way of implementing this model. The next chapter will discuss the effectiveness of applying adult learning principles to implementation of the present training model in order to try to find possible solutions for existing problems.

## **CHAPTER 4**

### **ESTABLISHING A BASIS FOR STRENGTHENING TRAINING PROGRAMS**

#### **INTRODUCTION**

For effective agricultural extension work, a basic requirement is professionally competent extension and supporting services. Qualitative improvement therefore is a necessity, and training becomes vitally important for this purpose.

The basic question most of the higher officers ask at present is whether training programs conducted by the In Service Training Institutes (ISTIs) are relevant. According to research findings (Gunawardena,1987:94) discussed in Chapter 3, it is indicated that more than fifty percent of the learners who participated in ISTI training programs felt that these programs did not contribute to changing their knowledge, skills or attitudes. So there is something wrong, somewhere, in the training process.

It is reasonable to expect this kind of negative reaction in the present programs. There always seem to be learners whose expectations have not been fulfilled or who are upset or offended by something that did not happen. On the other hand, given the range of learner characteristics, needs and expectations, it is virtually impossible to please all of the learners all the time. But educational programs are planned to achieve explicit or implicit learning objectives. If objectives are not achieved, then mistakes were made somewhere in the design or delivery of the program.

Since one important purpose of educational planning is to design learning experiences with a high probability of promoting specific changes in human capability, it is impossible to determine if there are flaws in our plans or in our planning process, if we do not have a clear understanding of what capabilities we are trying to change and in what way.

As discussed earlier, present problems have not emerged because of the recently introduced training model, but due to the way of implementing the model. Therefore, it is important to use the present training model as a framework for suggesting how the implementation of the model can be strengthened.

In brief, the problems of implementation identified in the previous chapter are:

a) Problems encountered in planning phase

- Learners characteristics are not considered in planning.
- What is taught to the learners may not be relevant to their work.



-Training objectives are not clearly determined.

b) Problems encountered in preparation phase

- Training methods/techniques are not appropriate to the objectives.

c) Problems encountered in presentation phase

- The way of conducting training is not appropriate to the learner.

- Inadequate motivation of learners to the learning process.

The purpose of this chapter is to consider the extent to which generally accepted adult learning principles as discussed in chapter two (and generally referred to in this chapter as the adult education literature), are evident in the present training programs of the ISTIs and whether the lack of such principles contributes towards the problems in implementing the learning model which have been discussed in chapter three. The discussion that follows is based on the belief that applying adult learning principles to the implementation of the training model in the ISTIs in Sri Lanka will improve the effectiveness of the training provided

### **ADULT LEARNING PRINCIPLES IN THE PLANNING PHASE**

When examining whether adult education principles have been adopted in the present situation, it is clearly shown that one of the problems is in identifying training needs and training objectives. This mostly happens because the trainers of the ISTIs have not given more priority to the planning stage of the training model. The first tasks of the planning phase

are to analyse the job requirements, carry out a trainee analysis and decide on their training needs. Trainers are then able to determine the training objectives (Figure 4.1).

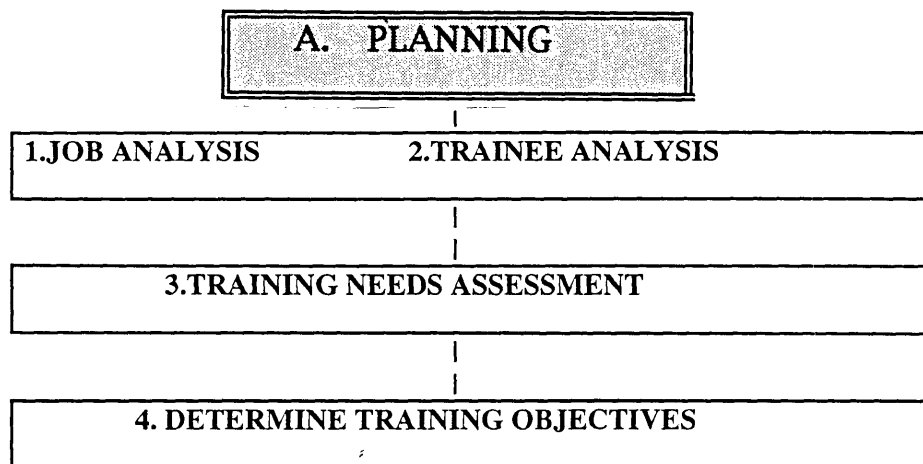


Figure 4.1 Planning Phase

#### TRAINEE ANALYSIS

In the training model presently used by the trainers of the ISTI, the importance of identifying the trainees' characteristics well before determine the training objectives is clearly indicated (Figure 4.1). According to the literature reviewed in chapter two, a learning situation is characterised to some extent by the nature of the learners. But in the present situation, the organisers of the training programs at the ISTIs do not look at the learners from this angle -- they just organise training

programs without considering the learners' characteristics. In most cases, they consider only the number of participants and their designations.

### **Characteristics of learners that may influence training**

Learner characteristics is one of the five elements which affect the teaching-learning situation according to Clark (1987). Learners' physiological characteristics, psychological characteristics, educational characteristics, socio economic characteristics, and working experience are the main characteristics which influence the teaching-learning transaction (Moss 1988,24).

#### **Physiological characteristics**

Adult learning principles clearly indicate the importance of making allowance for physiological and psychological ages of the learners (Bruner, Gibb, Linderman, Miller, Verner & Booth; in Bagnall,1978). According to the Brundage and Mackeracher (1980,23) "adults learn best when their vision and hearing are in the best possible condition". Kidd (1969), Knox (1981), Darkenwald and Merriam (1982), also state that adults learn best when they are in good health, are well rested and are not experiencing stress.

When comparing these learning principles with the characteristics of the learners who participate in ISTI training programs, the reasons for the failures of the training programs can be clearly understood. As mentioned earlier, learners in the ISTIs are mainly adults, and are aged between 25 and 55. But the majority of them are aged 35 to 45.

According to the literature, it can be clearly seen that decline of vision, hearing and reaction time are high in this period. The learners belonging to this age group perceive more slowly, think more slowly, and act more slowly than younger people.

Therefore, trainers should have an understanding of simple techniques which can easily compensate for some physical factors. These include simple matters such as considering the need for adequate lighting, seating arrangements, ventilation, environmental conditions which reduce distortion in sensory information, and processing information through a variety of sensory modes and formats. The trainer cannot compensate for the loss of speed resulting from physiological changes in adult learners, but he can ensure that optimum conditions for learning are present so that an adult can achieve his/her potential. This can be done by increasing the time allowed to perceive, by encouraging that adult to self-pace his/her response, and by providing immediate knowledge of results.

### **Learners' past experience and their self-concept**

The effect of the adults' accumulation of experience is to make adult learners themselves very important resources for learning. They can often direct their learning, and learn a great deal from each other. This assumption leads to advocating the use of experience as a resource for learning and the employment of experiential learning techniques. But under the present situation of the ISTIs, past experiences of adult learners are not acknowledged as an active component in learning.

"Part of the adult learner's past experience is organised and integrated into his self-concept and self-esteem. The adult learner needs to feel his past experience is respected and valued by others. When it is not valued, he may feel devalued as a person" (Brundage and Mackeracher,1980). According to Kidd, Millar, Knox and Darkenwald and Merriam, adults' past experience effects their current learning (Brookfield 1986, 31).

According to the learning principles, adult educators must be willing and able to respect the past experiences of adult learners. But in the present situation, most of the program organisers of the ISTIs do not consider learners' experiences when they organise or conduct training programs. As discussed in Chapter 3, the majority of learners participating in ISTIs are aged 35 to 45. That means most of them have 10 to 20 years work experience in their fields. Their experience is derived from a wide range of roles and responsibilities. Therefore they have more to contribute to learning. These life experiences affect their learning abilities and opportunities, perceptions of certain aspects of life, and also what they wish to learn. But in the present situation, learners do not have the opportunity to share their own experiences with trainers or other participants because most of the training programs are teacher-centred rather than learner-centred.

Everyone has had educational experience, work experience, social experience, cultural experience, personal experience, and practical experience of daily living. At present the learners are in learning situations where trainers do not ask them if they have had any experience relevant to the subject; or, where they have not had an opportunity to bring their own experiences into the conversation; and they feel the frustration of that missing link in the training. Knowles (1970,44) makes

the point very firmly: to an adult his experience is him: he defines who he is, establishes his self-identity, in terms of his accumulation of a unique set of experiences, he has a deep investment in its value. And so when he finds himself in a situation in which his experience is not being used, or its worth is minimised, it is not just his experience that is being rejected -- he feels rejected as a person.

But ISTIs can do much to make the learning experience more attractive to adults. If trainers of the ISTIs could establish an environment where adults feel accepted, respected and supported, the adult self-concept could be enhanced and the training would be more effective.

### **Training needs identification**

Most adults come to the ISTIs to learn for a specific reason. They are goal oriented, pragmatic learners. They want their learning to help them solve problems, build new skills, advance their jobs: in general to do, or decide, something that is of real value to them. The dominant question and request of adult learners for anyone who teaches them is "Can you really help me?". The way to begin to answer this question is to know that trainers have to know something beneficial to offer these adult learners. So the trainers have to know what is really needed.

Training need is a gap between 'what is' and 'what should be', a discrepancy between the present level of performance and a higher level which ought to exist for the individual's benefit, the good of the organisation or the welfare of the society (Knowles,1970;85 and Fox 1994;24). Brennan (1988) states that "need is a condition in which

someone perceives that there is a deficiency". According to the assumptions of andragogy, the critical element in the assessment of the gaps is the learner's own perception of the discrepancy between where they are now and where they want to be.

If the interest is to correct deficiencies or gaps, whether it is in the interest of the individual or the society, seeing the deficiency alone will not be sufficient, for it may be due to a range of reasons. As an example, a person who still grows only traditional old varieties of rice may be doing so for many reasons such as: lack of knowledge on new rice varieties, lack of financial capacity to fulfil higher level of management requirements, lost faith due to a bad experience during the past season, and so on.

Since the goal of training is to change the behaviour or job performance of learners, trainers must firstly determine their training needs. The job/task analysis and trainee analysis can help reveal the discrepancies between what trainers can do, and what they should be able to do. The decision as to whether to conduct training should then be based on these discrepancies, rather than on an impulse from management or top level administration.

### **Training needs identification of the ISTI programs**

Adults education principles clearly indicate that, adults like their learning activities to be problem centred and to be meaningful to their life situation and they want the learning outcomes to have some immediacy of application (Gibb, Kidd, Millar, Knox, Smith,

Dakenwald and Merriam; in Brookfield,1986,31). Adults' learning tends to focus on the problems, concerns, tasks and needs of the individual's current life situation. "Adults are highly motivated to learn in areas relevant to their current development tasks, social roles life crises, and transition periods" (Brundage and Mackeracher 1980;103).

"Adults are aware of specific learning needs, generated by real life tasks or problems" (Knowles 1980, 43). Adult education programs should therefore be organised around 'life application' categories and sequenced according to a learner's readiness to learn. Furthermore, Knowles goes on to say that "the involvement of the learners in the process of planning their own learning, with the teacher serving as a procedural guide and content resource".

Knowles identified as fundamental to this principle the involvement of learners in diagnosing their own learning needs, stating that "great emphasis is placed on the involvement of adult learners in a process of self-diagnosis of needs for learning". (Wlodkowski 1985, 48). states that "most often, needs act like strong internal feelings that push a person towards the general goal. The stronger the person feels that need, the greater the chances to attain the related goal". According to Fox (1994, 24), learners' involvement in the planning process is a widely accepted principle in program planning.

As mentioned earlier, most of the learners come to the ISTIs for specific reasons. These reasons are based on what they think they need. However, if the content or process of instruction does not in some way meet these needs, the learning will have very little meaning for



learners. Adult learners learn in response to their own needs and perceptions, not those of their instructors.

According to the adult learning principles discussed above, that the training needs identification is an important task in successful training. Therefore, trainers of the ISTI have to give more consideration to this task. ISTI programs should include an opportunity for learners to assess their own needs with the guidance of the trainers. This could be done if trainers could meet the relevant target groups after they get the training needs from the RTWG meeting.

Learners are not always capable of describing their own needs, or do not always have a broader vision (e.g. of economic or technological developments) which may affect their future needs. Therefore the trainers needs to be able to make professional judgements in order to balance the learners' expressed needs with those of the organisation.

### **Identifying training objectives**

The literature of adult education clearly indicates the importance of having clear objectives for training. As discussed in chapter 3, although the trainers at ISTIs also write objectives for their training, those objectives do not clearly describe the terminal behaviour of the learners, i.e. the expected outcomes of the learning. If trainers do not know where they wish to go or how to get there, then the resulting instruction is apt to be haphazard, confusing and unproductive. The most important characteristic of an instructional objective is that it clearly and completely communicates to the trainer and learners what it is the

learners should know and be able to do upon completing the study of the problem area. The major focus of instructional objectives should be on specifying observable (measurable) behaviour which learners need to exhibit once they have studied the problem area.

Need for training arises out of a problem situation, where the problem always expresses itself by various observable signs. Knowing the existence of the problem is not sufficient for solving the same. Poor rice yield in a particular area is the indication of a problem. There can be a vast number of social, economical, technical, political reasons for it. Training cannot deal with all of these. It is essential to try to identify the most critical issue that causes the poor yield and see what role training can play in resolving it. Unfortunately, this is not happening at present. Very broad training needs are identified. For example, if wrong practices of the farmer are identified as the reason for poor yield, broad training needs would then be to improve the practice level of the farmer. Subsequently, this broad need should be broken into specific areas for determining training objectives.

The problem of the person who does not know fishing is that "he does not do fishing, but depends on someone for fish". A trainer should know exactly why he does not want to fish: he may not have a positive attitude towards fishing, or maybe his attitude is all right, but he lacks the basic knowledge of fishing, or maybe because he lacks experience of fishing, or it can be due to any combination of these deficiencies. It is up to the trainer to find out exactly what keeps him from fishing. There cannot be any compromise to this requirement. If the cause of the problem is his negative attitude, what is essential to do is only a question of knowledge -- knowledge should be imparted. If the problem remains only because he does not have the skill to fish, training should concentrate on that aspect.

Instead, if we attempt to solve the problem as we mostly do by a "shotgun" approach, we are very likely to fail. Resources will also be wasted. Therefore, any training has to have its own objectives to achieve.

Objectives answer the question: 'What will the learners be doing at the end of the training?', and so they begin with a verb such as: describe, identify, estimate, select, compare, define, plan, etc. Objectives written in this form provide a very useful guide to the planning of learning opportunities and offer suggestions about how we can assess whether the learners are displaying the behaviour indicated in the objectives.

While comparing the literature with the present situation of the ISTI programs, it is necessary to strengthen the way of writing behavioural objectives. According to one author an objective must --

- describe the final results
- be specific and precise
- describe a change that is measurable or observable
- list criteria against which success can be measured or judged
- mention all the essential conditions under which the results can be achieved
- specify the end point.

(Moss, 1988, 27)

## **ADULT LEARNING PRINCIPLES IN PREPARATION PHASE**

After identifying the training objectives, the content of the course is decided on. This should cover the detailed knowledge, skills and attitudes

required on topics which support the objectives. When the content of the training course has been selected, classified and arranged in suitable order, the trainer can then decide on the training methods to use to make the training enjoyable and effective. Lesson plans should list the steps and activities and equipment needed in training sessions (Figure 4.2).

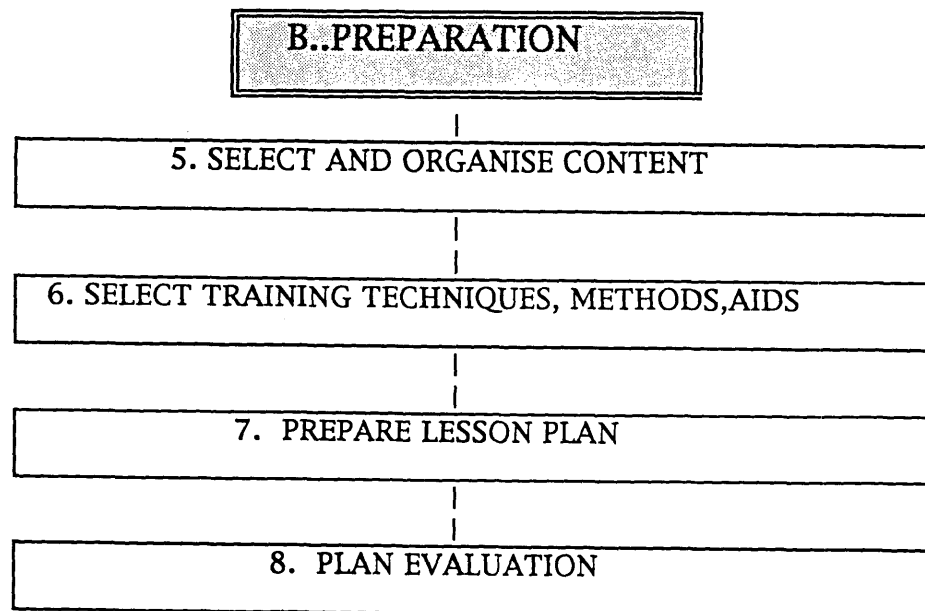


Figure 4.2 PREPARATION PHASE

### SELECTION OF TRAINING METHODS

Selection of appropriate training methods and techniques (step 6) is the main problem in the preparation phase of the training model. In the present situation, more priority has been given to the preparation of lesson plans (step 7), rather than selection of training methods and techniques. In the preparation stage, the first task is selecting and organising content of the training course. This should cover the detailed knowledge, skills and attitudes required on topics that support the

objectives. When the content of the training course has been selected, classified and arranged in suitable order, the trainer can then decide on the training methods to use to make the training effective and enjoyable.

### **Why training methods are not appropriate**

Once objectives are defined for the training activity, the next question is how to make the change in attitude or level of knowledge or skill level. It cannot be presumed or taken for granted that imparting knowledge will change attitudes. Trainers should work hard to find out the exact root cause of the problem before aiming to attack the problem. If the objective of the particular training session is to improve the learner's skill, the trainer should select a training method which will help to change the attitude. But in the present situation, this is not happening. Most of the trainers select training methods without considering the expected terminal behaviour of the learner. They just select a method which is familiar to them or which is easier to use.

Therefore, it is often claimed that the training programs offered by the ISTIs are too theoretical and not designed to change learners' behaviour. What mostly happens in conventional teaching is delivery of subject matter which the teacher processes. The trainer decides what subject matter, at what depth, in what order, is to be passed on to the learner to be understood, absorbed, adapted by the learner. This method of teaching is only a delivery method, subjective in nature, not designed to achieve an objective. Subjective training of this nature will bear only minimum, or no fruits at all, in the end.

The straight lecture is one of the most inefficient methods of teaching. It calls for very advanced learning skills of the part of the listener; and the rate of forgetting the subject matter is high. A combination of teacher-chosen subject matter, teacher-determined amount of knowledge and presented material can create the greatest obstacle to an effect adult learning environment Rogers(1986, 35). Sternberger (1995) also states that the lecture format, the principal method for instruction at present, is mono-modal, stimulating only the auditory sense.

The learning principles derived from the literature of adult education by Brundage and Mackeracher (1980, 112) state that "adults learn more productively and satisfactory when their learning and cognitive styles match those of the teacher". According to the Gibb, Kidd, Millar Knox (in Brookfield,1986;31) "adults exhibits diverse learning styles-strategies for coding information, cognitive procedures, mental sets- and learn in different ways".

### **Guide to selecting appropriate method**

The literature of adult education shows that the teaching method of any training program is likely to be determined by the aims and objectives of that particular learning situation, and the nature of the clients. According to Knowles(1970, 293) there are two simple guidelines to identify a suitable training method. The first guideline is to match the technique to the objective; the second is the principle of participation.

In formal training situations, the main objective is to accomplish specific learning within a restricted time period. Trainers must therefore clarify precisely what learning they want the learners to achieve. These instructional objectives then serve as a clear focus for the whole training program. Specific objectives in terms of knowledge, skills and attitudes indicate what material must be taught. This consequently affects the choice of training methods.

There is no one strategy or method which can be effective for all learners or all learning goals. Accordingly, trainers must have a broad repertoire of methods and be able to choose the most appropriate method in relation to a specific learning situation. Sternberger (1995) states that "the need for trainers to practise varied teaching techniques to address learning styles, and to promote information retention is not simply desirable but imperative". Norland (1994,158) suggests that the "psychology of learning is focused upon methods, techniques, or a group of techniques by which learning works toward its goal". Simpson (1995) states that "appropriate methods for educating adults would seem to involve their active involvement in the learning process, and the provision of appropriate support by the trainers".

According to the literature, we know that people learn best through experience. Without a chance of trying something, what experience can a person gain? That is why it is necessary in training activities to adopt possible participatory methods of learning. For appropriate application, trainers should be well acquainted with such methods to choose from. When there are a number of different methods to choose from, criteria for the selection will be --

- effectiveness
- relevance
- appropriateness.

In practice, it is often the trainer's convenience which gets preference, which is not the best. Convenience to the trainer may have only a negative contribution towards achieving the objectives of the training. Therefore, it is the responsibility of the trainer to choose the method/methods that best help to achieve objectives. The question of changing attitudes, or level of knowledge, or practice of the individual effectiveness rest upon:

- \* participants involved in the process.
- \* opportunity to try.
- \* trainer-friendly methods of presentation.

As discussed earlier, training programs conducted by the ISTIs are not designed to achieve an objective. Training methods are selected without considering expected behavioural changes of the learners. But according to the literature of adult education, it is necessary to include the following features in the teaching-learning process of the ISTI programs to overcome the present problems:

- \* get the learner to actively participate in all possible ways
- \* provide every opportunity to the learner to learn by experiencing
- \* choose all learner-friendly methods appropriately where learners show willing participation and enjoy participation



\* ensure active participation of trainees all the time.

## ADULT LEARNING PRINCIPLES IN THE PRESENTATION PHASE

The success of the presentation phase is mainly dependent on the characteristics of the facilitator. People gathered together in a classroom does not mean that training is automatically occurring. Teaching-learning is not an event that happens naturally. It is an event that happens under certain conditions. According to Clark (1987, 37), the characteristics of the facilitator are one of the main elements which affect the teaching-learning transaction. While comparing the trainer's role with the training model currently used by the trainers of the ISTI, it is clearly shown that the trainer has to play an important role throughout the training process. But his major role is in the last stage of the training model: the presentation phase (Figure 4.3).

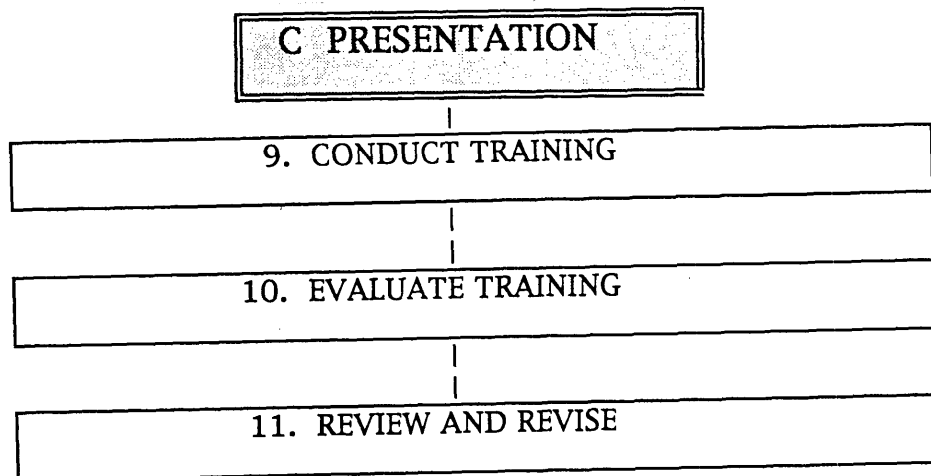


Figure 4.3 Presentation Phase

Present training programs of the ISTIs are designed to strengthen competencies of the officers while they are on the job. Therefore the trainers of the ISTIs have to play a very important role because these programs are significantly distinguished from other forms of educational programs by reference to the nature of its target groups. Since the main target group of the ISTI is adults, the trainers attached to the ISTIs need to have a thorough understanding of the aims and objectives of adult education, and educational administration, planning, organising, and conducting adult education programs. But in the present situation the way of conducting training by the trainers of the ISTIs is not appropriate to the learners characteristics and there is no adequate motivation of learners to learn.

### **Conducting training**

Experience shows that the trainers of the ISTIs do not value or respect individual learners. As trainers of adults, they think that they are quite like teachers of children. Actually, the trainer is an adult among the adults. The customary advantages of age, experience and size cannot be counted on for extra leverage or added influence as they might be for a school teacher.

Learners who come to the ISTI programs have had experience that often far surpasses the background of their particular instructor. As a group, they have more field experience than any individual trainers. Collectively they have had more problems, achieved more success, and overcome more failures. It is highly unlikely that trainers can simply impress them with their title, whether it be trainer, lecturer or researcher.

Unfortunately, under the present situation, most of the trainers think that knowing a lot about a subject is enough to teach it effectively.

Training centres abound with knowledgeable trainers who teach quite poorly. In many instances, this is simply because they have not considered what learners might understand and be able to apply from that they profess. They have not taken the step to connect their knowledge to the daily needs and lives of their learners. For this reason, there is no bridge for common understanding.

The present problems in conducting training mainly occur because the trainers of the ISTIs do not have enough knowledge and skills about adult education practices. Therefore, most of the programs organised by the ISTIs are similar to the formal educational programs which are in a normal education system.

To be the best adult educators, ISTI trainers have to give more consideration about learners than about things and events, know their subject matter, relate theory to practice and their own field to other fields, be confident as instructors, be open to a wide variety of teaching approaches, share their whole person, encourage learning outcomes that go beyond course objectives, and create a positive atmosphere for learning.

It is particularly useful for those who attached to the ISTIs, to be aware that their clients, in contrast to children, bring with them a richer background of experiences and that they possess significantly more power in their relationship with their instructor. For the educator of adults, it seems extremely important to be aware of and cater for

previous experience and the roles of teacher and learner. According to one researcher, "developing and maintaining good interpersonal and human relationship skills is vital to the adult educator" (Galbraith, 1990;7).

A good trainer should treat learners as he himself would like to be treated. A trainer must generate a co-operative spirit in teaching-learning activities. As discussed in chapter three, trainers of the ISTIs do not maintain a close relationship with their learners, and they are not willing to learn about the learners, so they cannot respond in individual ways to teach learners. So this is another area that trainers of the ISTI need to improve, to be successful adult educators. A good trainer respects the learners and tries to promote their self-respect and self-reliance.

According to the literature, adult learning is facilitated when the trainer is sensitive to the physical and emotional well-being of individual learners. Unfortunately, trainers of the ISTIs do not consider the characteristics of their learners; for the most part they do not take into consideration the physical differences of adult learners. Some physical factors can be easily compensated for by using simple techniques.

## **ENHANCING ADULTS' MOTIVATION TO LEARN**

As discussed earlier, 'students' in the ISTIs are officers of the DOA and officers from other agricultural related organisations. They usually come to the ISTI to improve their knowledge and skills related to their job requirements. These officers do not get any incentive for participating in these training programs. Most of them participate because their higher

officers have asked them to participate. In most cases, they are not volunteers for the training programs, so their attitude towards training is quite negative. Therefore, in the present situation, it is necessary to keep learners within a learning situation and encourage them to learn. So this is another important task that trainers have to consider in the presentation stage of the training process.

To facilitate learning, a trainer needs to understand the various interrelated factors that can influence the learning process. Perhaps the most important factor is the motivation to learn. Evidence suggests that not much learning takes place in the absence of motivation. Experience shows that when learners are motivated during the learning process, things go smoothly, communication flows, anxiety decreases, and creativity and learning are more apparent.

Motivation to learn in agricultural education is partly a function of the personality and other attributes of the learners. But motivation to learn is also a function of the quality and variety of the trainer and the institute. In the present situation, the reason ineffective and unmotivated learning so frequently occurs is because of the lack of motivation planning on the part of the trainers. Lesson planning and instructional design have existed, but not with continuous attention to and detail for motivated learning throughout the instructional sequence. Attention to stimulation has usually been woefully lacking. Although they plan an effective sequence, that does not mean the learners will be motivated while learning.

## **How to motivate adults to learn**

Wlodkowski (1993, 60) discusses six major factors of motivation: attitude, need, stimulation affect, competence and reinforcement. Each of these major factors has a wealth of multiple theories as well as related research that supports its powerful influence on learner motivation. According to Wlodkowski, "every learning sequence can be divided into three phases according to a time continuum: a beginning, a middle, and an end. There are effective things that can be done during each of these phases to enhance learner motivation." (figure 3.2). At the beginning, when learners enter and start the learning process, their attitudes towards learning and need are the crucial factors for motivation.

When learners are involved in the learning process, the stimulation affects the learners via the learning experience; and when completing the learning process, competence and reinforcement are the major factors for motivation. According to the literature, "these six major motivational factors are probably not equal in their motivational influence upon the learner. Each is quite powerful. Therefore, the most productive route is for the trainer to plan motivational strategies for each factor so that a continuous and interactive motivational dynamic is organised for maximum effective instruction" (Wlodkowski:61).

Comparing the present situation of the training programs of the ISTI with the motivational model, learners' motivation is badly needed at the beginning of the training programs. As discussed earlier, learners' attitudes towards the general learning environment, training needs, and self is negative at the beginning of the training programs. Therefore, most of the learners who participate in ISTI training programs start

learning experiences with a low level of arousal and generally they require further arousal to motivate learning. Under this situation, if a trainer adds further arousal through demands created by information overload, discounting personal experiences, and so on, the learner may withdraw or become self-defensive and appear to lack motivation. Therefore, a trainer would be wise to spend some time during the first few learning sessions deliberately lowering anxiety to a manageable level.

According to the learning principles, trainers who design programs and direct training activities that motivate learners in a positive manner, must be aware of, and sensitive to their interests, wants and aspirations. This is more relevant to the present condition of the ISTIs programs. Especially trainers of the ISTIs have to determine and pay attention to learners' characteristics, academic aptitude, and their educational and occupational aspirations and plans, special or unusual talents and experiences they have, and the nature of the environment in which they live and work. Trainers especially pay attention to the reasons learners enrol in particular training programs, and what types of activities, level of achievement, and degree of recognition motivate learners.

In addition to skills as a teacher, the enthusiasm of the teacher is an attribute that is considered to be a major factor in the motivation of learners. According to Newcomb (1993:31), "Teacher movements, gestures and voice inflections are considered to be factors that learners associate with a teacher's enthusiasm. Motivation is enhanced by teachers who are stimulating rather than boring, and alert and active rather than apathetic and lackadaisical".

Comparing these factors with the trainers who belong to the ISTIs, it is clear that the enthusiasm of these trainers is not up to the accepted level. This comes about because the DOA has assumed that the method and techniques used in the education of children would be equally effective in helping adults, and therefore trainers have not been exposed to adult learning practices. Therefore, the trainers are not able to trust themselves to cope with all types of situations. So the self-concept of the trainers is negative, or sometimes depressed. Therefore, they respond inflexibly or defensively to the learners, thereby increasing their stress and anxiety.

According to the literature (Newcomb:1993,Wlodkowski:1993), "Novel training experiences stimulate learners. Talking about their experiences gets learners actively involved, which in turn motivates them. The use of actual objects, specimens, audio visual aids, attract the attention of learners, gets them involved, and creates a high level of interest. Learners' involvement in the teaching-learning process can be an effective means of motivation". Therefore, it is the responsibility of the trainers of the ISTIs to see that their involvement is meaningful and motivating, and that it contributes positively both to the instructional process and to the outcomes achieved.

When learners are actively and appropriately involved in formulating learning goals and in planning activities, they hold a degree of ownership in the teaching-learning enterprise; and consequently they are motivated to ensure that goals are achieved and activities completed successfully.



## VALIDITY OF ADULT EDUCATION PRINCIPLES

The generation of appropriate technology through research and the transfer of that knowledge to farmers by extension are fundamental to increased food production leading to the self sufficiency which is expected to be attained in Sri Lanka. However, to date, very little progress has been made in attempts to get farmers to adopt recommended agricultural practices for increasing their level of production. As in other developing countries, many factors are known to contribute to the non adoption of agricultural technology by farmers in Sri Lanka. Among these factors the inadequate level and type of training of extension workers ranks high on the list of those most frequently encountered in the literature. Natesan (1984:63) states that...

*...the quality and effectiveness of training are matters of concern. It is clear that strong training support is absolutely essential for the success of the training. To promote acceptance of the training process awareness and understanding on adult learning principles have to be created in the minds of trainers, local officers, and administrators. This again has to be done on a continuing basis..*

In the last few years there has been very little change in the system in Sri Lanka. Consequently, most of those who have been through the system (including trainers of the ISTIs, extension workers, researchers and agricultural change agents) reflect no awareness of alternative approaches to learning. In this regard, the situation in Sri Lanka bears a resemblance to the situation in other developing countries such as India, Pakistan, Bangladesh. Most of these countries create a dependency cycle in the

educational institutions as well as in the general work force. In this cycle the learner is dependant on the trainer (Galgali and Lindt, 1984, Natesan 1984).

From their experience with a number of extension services in World Bank-assisted projects in Third World Countries including Sri Lanka, Galgali and Lindt (1984:64) state that:

*...to provide farmers with profitable technology, the extension agent should possess relevant skills: he should be able to perceive farmer problems, offer useful advice, develop good relations with farmers, and communicate effectively."*

This is because the knowledge and experience of the target group were, in the first place, acquired independently of the trainers. Secondly they value their knowledge and experience because they have satisfied their needs over time. Therefore when trainers ignore learners' knowledge and experience, learners are bound to react negatively. As Knowles (1984:58) observed "in any situation in which adults experience is ignored or devalued, they perceive this as not rejecting just their experience, but rejecting them as persons".

In-service training is supposed to help officers, who are adults, learn new farming skills. Under normal circumstances, this should represent a classic example of an adult learning situation. Therefore, it is only logical that in-service training conforms to the basic principles of adult learning. It is fully acknowledged that trainers of the ISTIs in Sri Lanka face enormous logistic

constraints in the execution of their duties. However the greatest constraint of all that they face is the lack of awareness of more effective strategies of education than those to which they themselves were subjected. Therefore it is very much necessary to introduce the adult learning principles to the trainers of the ISTIs and to increase their capabilities in adult education.

## **SUMMARY**

The principles of adult learning provide the foundation for all phases of the training model. This chapter discussed the contribution of those generally accepted principles towards the problems in implementing the training model, which have been identified in chapter three. By applying adult learning principles to the three phases of the training model; planning, preparation, and presentation, it has been clearly shown that the trainers of the ISTIs could improve the effectiveness of the present training situation, if they able to implement each task of the training model according to those principles.

Though the trainers of the ISTI have a fairly good knowledge of the training model, they appear to have some limitations in implementing the present model. Therefore the next, and final, chapter will not only make some recommendations for more effective implementation of the model, using principles of adult education, but will also examine the possible constraints which affect the implementation of the model and make some recommendations about them.