

**APPLICATION OF ANDRAGOGICAL PRINCIPLES IN AGRICULTURAL STAFF DEVELOPMENT
PROGRAMME AT THE INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE**

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Abstract

The study assessed the application of andragogical principles in the IITA human resource development programme. Specifically, the study determined trainees' level of awareness of course objectives before course, relevance of topics to trainees' jobs, adequacy of course venues for adult learning and assessed management and implementation of the course as perceived by the trainees. A descriptive survey research design was used for the study. A simple random sample was estimated by purposive sampling from the trainees that attended 1998 IITA training courses. A total sample size of 210 was used for the study. Data were collected through the use of questionnaire. The results of the study show that there is adequate application of andragogical principles in IITA training courses as majority of respondents have positive perception to the course objectives. However, the study reveals that majority of the respondents (67.1%) that attended IITA courses are not aware of course objectives prior to training course. The findings of this study therefore, have some implications for human resources development and training practitioners as well as policy makers. For effective training programme, consideration should be given to adequate training need assessment and prior awareness of course objectives by trainees and provision of adequate environment for trainees.

1.0 Introduction

Human resource development in national agricultural research systems (NARS) constitutes the foundation of long term sustainable agricultural research in sub-Saharan Africa (EARRNET 1995). This is because effective diffusion of new knowledge and materials developed by NARS for successful growth in agricultural production, depends on the development of cadres of extension workers whose background includes training in research as well as in communication and marketing (Ruttan, 1982).

Adult learning theory is particularly adapted for effective skill development by involving the participants in work-like experiences. Knowles (1970), clarified the differences between adult and child learning. Knowles (1973 and 1975), also reviewed and revised the purposes, processes and assumptions behind adult learning. Andragogical model is a process model which is in contrast to the content model by most traditional educators that decide in advance what knowledge or skills need to be transmitted. Adults do not learn the same way as children. They have certain unique characteristics that require different teaching approaches and techniques. Barriers to adult learning have been identified to be situational, attitudinal and inherent problems (Ansah, 1994). Adults expect their courses to have the best possible educational structure and teaching-aids, they expect learning success to be quickly seen,

they expect the duration of the training to be clearly defined, and as men and women with experience of life, they expect to be taken seriously (Lucerne, 1994). The entry of large numbers of adults into educational and training programs has challenged ideas about traditional learning styles (Daloisio and Firestone, 1983).

Also, with the declining in the number of attendance of invited trainees at IITA courses in recent times, there is need to investigate the application of andragogical principles in the training courses. This is because, providing persuasive defects in adult learning programmes can facilitate effective manpower development in agricultural training organisations.

1.1 Objectives of the study

The major objective of the study, therefore, was to assess the application of andragogical principles in the IITA human resource development programme. Specifically, the study had the following objectives:

1. Determine trainees' level of awareness of course objectives before course;
2. Ascertain relevance of topics to trainees' jobs;
3. Assess management and implementation of the course as perceived by the trainees; and
4. Determine adequacy of course venues for adult learning.

2.0 Theoretical/conceptual framework

Knowles' concept of andragogy formed a theoretical base for the study. Andragogy is a contemporary, coherent and comprehensive body of theory and technology, based on research findings about adult learners (Knowles, 1984).

Adult learning should not be based just on the transmittal of knowledge as is usual in pedagogy. The process for designing and operating a learning group or any other form of adult education must involve the 7 steps in Andragogical model.

This is a process model, which in contrast to the content model by most traditional educators that decide in advance what knowledge or skills need to be transmitted. However, in andragogical model, the facilitators or change agents involve continuous circular application of seven steps:

Setting a climate for the learning, establishing a structure for mutual planning, addressing interests, needs, and values, formulating objectives, designing learning activities, implementing learning activities and evaluating results (reassessing needs, interests and values). These seven steps may be viewed as a learning systems model that uses a feedback loop. It is described in graphic form as shown in Figure 1.

- Organization**
1. A climate for learning
 2. A structure for mutual planning

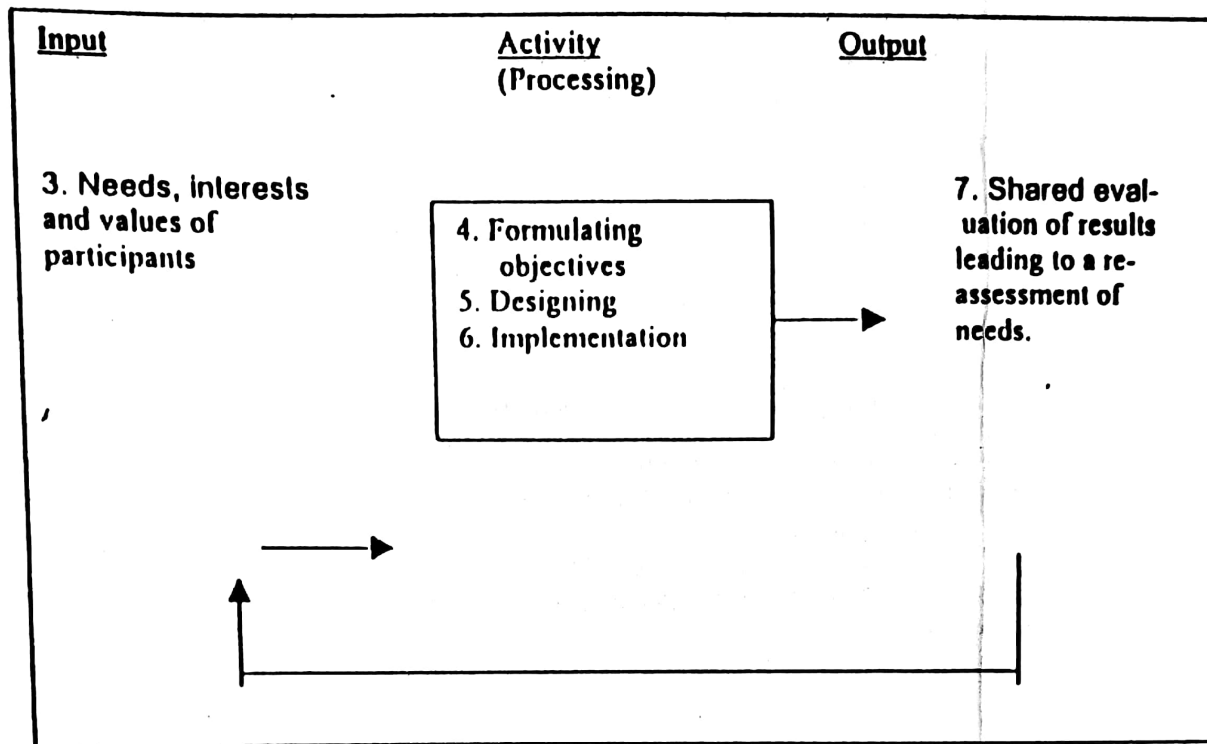


Fig. 1

Andragogical Model

Source: Coursey P. (1986) Adult Education Theory and Experiential learning. In Agricultural Trainer Development (Training of Trainers), United States Department of Agriculture.

3.0 Methodology

A survey research design was used to collect relevant data for the study. The survey was constructed to obtain at the end of each training course the perceptions of sampled participants to the adequacy of practice of andragogical principles.

The accessible population for the study was the participants/trainees that attended the 1998 training courses at both IITA campus and other locations in Africa. A random sampling technique was used to select sampled participants from each course conducted in 1998. In all, 210 participants were selected for the study. A structured questionnaire, scored on a 3-point scale with close-ended questions for quantitative data and open-ended questions and comments to provide qualitative data, was instrument used for data collection. The variables were given numerical values using numeric value such as, 0 for "no response", 1 for "poor", 2 for "satisfactory" and 3 for "good".

The questionnaires were administered to the randomly selected participants as the last scheduled activity of each course. Data collected were collated and analyzed using frequencies and percentages. All analyses were done using SPSS for Windows version 6.0. In addition, comments and open-ended questions in the questionnaire were collated for qualitative data.

4.0 Results and Discussion

4.1 Socio-demographic data of respondents

Data analysis shows that a higher proportion of the participants are between 31 and 40 years of age (54.8%) and no participant below 25 years old. About 82.9% of the trainees are male. The result also shows that a very small percentage (6.2%) of the participants are single. Table 1 shows that majorities of the participants have B.Sc./HND degrees (54.8%) and OND (26.2%). A large percentage of the participants are researchers (44.3%) and majorities of the participants work in research institutes (41.0%).

Variables	Frequency	Percentage (%)
Age:		
25-30 Years	20	9.5
31-40	115	54.8
41-50	75	35.7
Sex:		
Male	174	82.9
Female	36	17.1
Marital status:		
Married	197	93.8
Single	13	6.2
Qualification:		
Diploma	55	26.2
B.Sc/HND	115	54.8
M.Sc	32	15.2
PhD.	8	3.8
Job Title:		
Technician	43	20.5
Researcher	93	44.3
Extensionist	74	35.2
Institution:		
Research Institute	86	41
Ministry of Agric.	65	31
Private institution	11	5.2
NGO	48	22.8

4.2 Awareness of course objectives before course

Majority of the respondents (67.1%) are not aware of the course objectives before the course (able 2). This result agrees with the findings of Holman (1993), when in a survey of training trends, only 36% of managers indicated that their organization routinely defined the aims of training programmes, while more than half (56%) did not know. However, this result contradicts the adult learning principles. Adult trainees need to know what they are going to learn before a course. As Carnegy (1982), puts it "when

a man does not know what harbour he is making for, no wind is the right wind. The first priority of the person in the training role must be that he/she knows exactly what it is that he/she is trying to achieve". According to Laird (1985), "trainees who know precisely what is expected of them are much more inclined to invest energy in pursuit of the goal." In a similar vein, Holman (1993), stated that "a major problem concerning training is that often it is carried out with unclear objectives and a failure to diagnose real training needs which may lead to the whole value of training being questioned." The high percentage of non-awareness of course objectives by the participants must have been due to inadequate training need assessment of the participants. In addition to the quantitative result, participants also made comments about the awareness of course objectives before course to support the earlier result. About 44% of the participants made related statements such as this: "what is expected of the participants should be communicated to him or her to prepare adequately for the course".

Table 2
Trainees Awareness of Course Objectives before Course

Awareness of course objectives	Frequency	Percent (%)
Not aware	141	67.1
Partially aware	46	21.9
Fully aware	23	11.0
Total	210	100

4.3 Relevance of training topics to participants' jobs

Table 3 indicates that the topics are highly relevant (75.7%). The high level of relevance to trainees' jobs agrees well with adult learning principle. It also agrees with the conclusion of Sterns and Doverspike (1989), after their study of training and re-training, that "training should be organized so that the materials are job relevant, gives positive feedback and encourages self-confidence." Torrence (1993), also puts it that "the content of the training activities must be relevant to trainees' jobs."

Table 3
Relevance of Course Topics to Trainees' Jobs

Relevance of topics	Frequency	Percent
Very Little	4	1.9
Some	47	22.4
High	159	75.7
Total	210	100

4.4 Interaction of trainees with resource persons

The result shows that majority of the trainees (63.3%) found their interaction with the resource persons as good (Table 4). This result agrees with the recommendations of some training experts that adult learning programmes should be interactive or else most trainees will be uninterested in the learning process. According to Moon (1991), for trainers to be successful, managing of relationship with the learning group must be of paramount importance.

Table 4
Level of Interaction of Participants with Resources Persons

Relevance of topics	Frequency	Percent
Poor	27	12.9
Satisfactory	50	23.8
Good	133	63.3
Total	210	100

4.5 Management of trainees and implementation of course

According to Moon (1991), one critical skill area often overlooked is that of managing relationship with the learning group. According to him, "indeed being a good trainer is all about managing good relationships. If we fail in that, we fail totally." Participants were therefore asked to indicate their feelings about how they were managed as adults in the training course. As table 5 shows, about half of the sampled trainees feel that the way the trainees was managed is "average". This result is in agreement with findings and suggestions of some trainers (Argyris, 1964, Torrence, 1993). Management of trainees is an important component to successful training.

Table 5
Management of Trainees and Implementation of Course

Relevance of topics	Frequency	Percent
Poor	28	13.3
Satisfactory	106	50.5
Good	76	36.2
Total	210	100

4.6 Adequacy of course venues for adult learning

Table 6 shows that about half of the trainees found the classroom (51.4%) and accommodation used for the course as "good" (42.4%). The respondents rate both the qualities of meals and local transportation as "average". More than half of the participants (55.7%) rate social activities as "poor". The result on social activities is at variance to the recommendation of human resource development and training experts that inclusion of social activities in adult learning activities motivate them to learn. This is because for training to be effective, participants need to be in a frame of mind different from their normal working mode and they need to be relaxed (Wheatley, 1993). Physical comfort in the course venue is as important as mental comfort. Learning could also be affected either negatively or positively by the design of a meeting environment, as it is unfair to expect trainees to maintain their concentration after spending long hours in a monotonous and sterile environment (Finkel, 1997). Similarly, Davis and McCollon (1974) indicated that "the ability to change is directly proportional to the degree of comfort adults feel".

In the open-ended question and comment section, 40% of the participants indicated that the arrangements and facilities are all "good". Fifty two percent indicate that the food is too monotonous and 37% indicated that it is not interesting to lodge two adult participants in a room.

Table 6
Participants' Evaluation of Venue Facilities (N = 210)

Classroom facilities	Frequency	Percent (%)
No response	1	0.5
Poor	4	1.9
Satisfactory	97	46.2
Good	108	51.4
Accommodation		
Poor	65	31.0
Satisfactory	56	26.6
Good	89	42.4
Quality of meals		
Poor	33	15.7
Satisfactory	136	64.8
Good	41	19.5
Social activities		
Poor	117	55.7
Satisfactory	76	36.2
Good	17	8.1
Transportation arrangement		
Poor	31	14.8
Satisfactory	117	55.7
Good	62	29.5

5.0 Conclusions, Summary, Policy Implications and Recommendations

The study assessed the effectiveness of application of andragogical principles in IITA training human resource development programme. Majority of the Andragogical principles seem to work in the IITA training courses while only a few do not. One problematic area relates to lack of awareness of course objectives by the participants before course. The findings of this study therefore, have some implications for human resource development and training practitioners as well as policy makers.

The study shows that, many trainees are not aware of course objectives before attending the course. This is a great challenge to training practitioners and trainees' organisations. There are many occasions when training needs of participants are not properly carried out and therefore, participants are just selected to attend courses without knowing what they stand to gain.

The way adults are managed and the type of environment provided for them are all important for effective learning. If these are not properly taken care of, they will not be interested in the learning process and thereby the purpose of the course is defeated. This is because adult learners are very sensitive to being treated as adults in adult learning programmes. Adult learners have occupational, family and social obligations, therefore, they make a very sober cost-benefit analysis of their course and want to obtain a worthwhile return for the investment of their time. For this reason, they pay more attention to the perceptible practical application for their training.

Based on the findings of this study, the following recommendations are made to improve adult learning programmes.

- i. There is need to diagnose real training needs to avoid selection of wrong participants for courses. In order to meet the requirement of adult learning principles, human resource development/training experts should ensure that the goals of training should be determined before getting into training environment.
- ii. Training objectives need to be part of long term strategic plan. However, when designing training programmes for adults, the trainer must consider the specific needs of the target audience in order to set adequate training objectives. Training should therefore be aimed at achieving specific results which are linked to the objectives of the course to be conducted.
- iii. There is also the need to thoroughly review the policy on accommodation, social activities, meals and local transportation for trainees. All these factors play important roles in the commitment of trainees to the learning process.

In view of available evidences from the study on the effectiveness of application of andragogical principles, it can be concluded that:

- i. Inadequate training needs assessment of the participants and inadequate communication between the training organisation and trainees are significant obstacles to effective application of andragogical principles.
- ii. Facilities at training venues are very important to the participants. Therefore training facilities need to be improved both at IITA or other outside centres.

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