Training Needs of Agricultural Extension Agents in the Central Agricultural Zone of Delta State Nigeria

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Abstract
The specific objectives of the study were to identify the training needs of agricultural extension agents, validate them and develop a theory of identification of training needs for agricultural extension agents. The total number of extension agents (52) and block extension supervisors (8) constituted the population of the study. Data were collected by the use of questionnaires. A four-point rating scale was used to rate the training needs. Data were analyzed by the use of mean. The Extension Agents agreed that they needed training in 8 areas of their job descriptions. These were script writing (M=3.17), audience analysis (M= 2.90), statistical analysis of field data (M=2.98), teaching/ communication skills (M=2.63), Participatory Rural Appraisal (M= 3.10), techniques for GMO foods production ((M=2.60), computer appreciation/skills (M=3.04) and use of multi-media projectors (M=3.27). However, the Block Extension Supervisors excluded statistical analysis of field data. Thus the valid training needs were 7. The training needs agreed by both Extension Agents and Block Extension Supervisors should be addressed before any other needs. The intercept theory of training needs identification is recommended for identifying the training needs of extension agents.

INTRODUCTION

Training in any form is intrinsic to organizational effectiveness and efficiency. Ovwigho and Ifie (2009) identified two major types of training programs - on the job training and pre-employment training. They stated that on the job training is the type of training given to an individual who is gainfully employed but requires certain knowledge and skills to improve his efficiency. In-service training and induction courses were classified as on the job training. Changes in technology could also lead to on the job training. They explained that pre-employment training is the type of training program given to an individual who has tentatively chosen a vocation or discipline but requires basic education to function effectively.

According to Dahama (1999), Williams (1978), Ekpere (1980), and Patel (1984), training is the process of acquiring specific skills to perform a job better. It involves the processes of teaching, informing and educating people. It helps them to become qualified and proficient in performing their duties, Obibuaku (1983) states that the ability of an extension agent to guide farmers from the awareness stage to sustained adoption of agricultural innovations was dependent on his training and experience in agriculture and extension methods. He emphasizes that training is one of the primary means by which the principles and functions of agricultural extension services can be put into practice.

The training of agricultural extension workers is an integral part of the overall agricultural production process. It is the duty of agricultural extension agents to reach farmers scattered around the country with useful and practical information for increased agricultural production. Agricultural Development Projects (ADPs) are the main organizations charged with the responsibilities of agricultural extension delivery. Jibowo (2005) affirmed that the two cardinal objectives of the ADPS were to increase food production and income levels of small scale farmers through well-coordinated agricultural extension services.

The study is devoted to investigating the training needs of the agricultural extension agents working with the Delta Central Agricultural Development Project. Training needs have been used to denote the gap between the level of skills or attributes presently possessed by the individual and the expected level. The specific objectives of the study were to:

i identify the training needs of agricultural extension agents;

ii validate the training needs of the agricultural extension agents; and

iii develop a theory of identification of training needs for agricultural extension agents

METHODOLOGY

Population of the Study:

The study covered 10 local government areas in the agricultural zone. The study was a population study. The fifty two (52) Extension Agents and eight (8) Block Extension Supervisors in the agricultural zone constituted the population.

Data Collection and Analysis

The training needs were derived from the job description of the extension agents. .Data were collected by the use of questionnaire. A four-point rating scale was used to measure the training needs. The scale was coded highly needed (4), moderately needed (3), slightly needed (2), and not needed (1). A mean value of 2.50 was used to dichotomize the responses into needed and not needed. A training need that was needed would have a score of 2.50 and above. The respondents included both Extension Agents and Block Extension Supervisors. The purpose of eliciting information from the Block Extension Supervisors was to validate the training needs identified by the Extension Agents. This approach agreed with the findings of Wentling (1992) that professional judgment by supervisors was important in identifying training needs of subordinates

RESULTS AND DISCUSSION

Training needs of Extension Agents

The Extension Agents were required to rate the skills or job specification in which they required training. The results are presented in Table1 which shows that the Extension Agents agreed that they needed training in 8 out of the 20 job descriptions. These were script writing (M=3.17), audience analysis (M=2.90), statistical analysis of field data (M=298), teaching/ communication skills (M=2.63), Participatory Rural Appraisal (M=3.10), techniques for GMO foods production (M=2.60), computer appreciation/skills (M=3.04) and use of multi-media projector (M=3.27) According to Agbamu (2006), there are two types of script writing, namely print media scripts and broadcast media scripts. Agricultural scripts are concerned with developing messages for a specified audience. The stages of script writing include the opening, the body, conclusion and proof reading drafts. He further states that audience analysis involves understanding the audience to which an agricultural invocation is to be delivered so that an appropriate communication strategy can be developed for reaching the audience.

Table 1 .Training needs of agricultural extension agents (N=52)

S/N	Training need.	Total Score	Mean	Remarks
1	Pest control	80	1.54	Not needed
2	Soil conservation	101	1.94	,,
3	Script writing	165	3.17	Needed
4	Skills for result demonstration	118	2.27	Not needed
5	Skills for method demonstration	151	2.21	,,
6	Audience analysis	151	2.90	Needed
7	Statistical analysis of field data	155	2.98	,,
8	Human relations/leadership skills	92	1.77	Not needed
9	Ability to carry out Training and Visit system	109	2.10	,,
10	Teaching/communication skills	137	2.63	Needed
11	Indigenous technology development	100	1.92	Not needed
12	Participatory Rural Appraisal	166	3.10	Needed
13	Programme planning	122	2.35	Not needed
14	Techniques for GMO foods production	135	2.60	Needed
15	Keeping records of monitoring/other activities.	64	1.23	Not needed

16	Computer appreciation/skills	158	3.04	Needed
17	Use of multi- media projector	170	3.27	,,
18	Improvisation/use of visual instructional materials	98	1.88	Not needed
19	Preparation/use of audio visual instructional materials	121	2.33	,,
20	Skills to establish SPAT	75	1.44	,,

NB:
GMO – Genetically Modified Organisms
SPAT – Small Plot Adoption Technique

Participatory Rural Appraisal techniques for GMO foods production as well as computer skills and use of multi-media projector were not popular techniques for agricultural extension delivery in the study area. Obibuaku (1983) noted that agricultural extension agents were poorly trained in Nigeria because of the notion that agricultural extension work was simple and any person could perform it. Today, the situation still persists and continues to attenuate agricultural extension services in the country.

For organizational effectiveness, it is imperative to establish a system of on-the-job training for agricultural extension staff because of continual changes in technologies. Ovwigho and Ifie (2009) noted that on the job training was premised on technological changes and need to improve efficiency in the production process. Igbokwe and Enwere (2001), and Pretty and Vodouhe(1997) defined Participatory Rural Appraisal (PRA) as a growing family of approaches and methods which enable local people to share, enhance and analyze their knowledge of life conditions so that they can plan and solve their problems by themselves with the extension agent acting as a facilitator. Participatory Rural Appraisal methods became popular in the 1980s as tools for overcoming the deficiencies of conventional rural development methods. The Training and Visit System is a major extension system used by extension agents in the study area. It is embedded in the organizational functions of Agricultural Development Projects. Ogunfiditimi and Ewuola (1995) explain that the Training and Visit system provides an organizational structure and detailed mode of operation which ensures that well informed extension agents visit farmers regularly and transmit messages relevant to production needs of the farmers.

Validation of Training Needs of Extension Agents

The Block Extension Supervisors were requested to rate the training needs of Extension Agents under them using the same questionnaire (Table 2). They agreed that extension agents needed training in 11 out of training needs specified in their job descriptions. Additional training needs recommended for the Extension Agents by the Block Extension Supervisor were skills for method demonstration (M=2.50), human relations/leadership skills (M=2.50) indigenous technology development (M=2.75), and preparation/ use of audio-visual instructional materials (M=2.75). However, the Block Extension Supervisor disagreed with training in statistical analysis of field data (M=2.13). Comparison of Table 1 and 2 shows that both Extension Agents and Block Extension Supervisors agreed on 7 training needs.

Table 2. Validation of training needs of extension agents

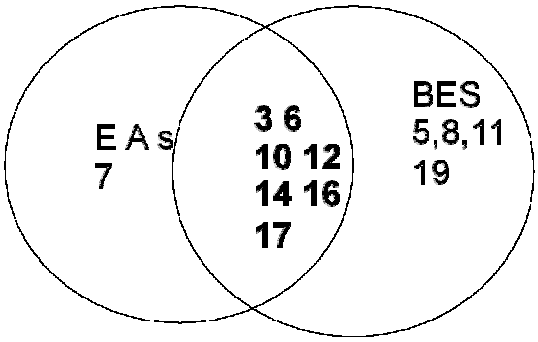
S/N	Training Need	Score	Mean	Remark
1	Pest control	9	1.13	Not needed
2	Soil conservation	11	1.38	,,
3	Script writing	28	3.50	Needed
4	Skills for result demonstration	12	1.50	Not needed
5	Skills for method demonstration	20	2.50	Needed
6	Audience analysis	31	3.88	,,

7	Statistical analysis of field data	17	2.13	Not needed
8	Human relations /leadership skills	20	2.50	Needed
9	Ability to carry out Training and Visit system	15	1.88	Not needed
10	Teaching/communication skills	23	2.88	Needed
11	Indigenous technology development	22	2.75	,,
12	Participatory Rural Appraisal	28	3.50	,,
13	Programme planning	13	1.63	Not needed
14	Technique for GMO foods production	32	4.00	Needed
15	Keeping records of monitoring / other activities	14	1.75	Not needed
16	Computer appreciation /skills	26	3.25	Needed
17	Use of multi-media projector	30	3.75	,,
18	Improvisation / use of visual instructional materials	17	2.13	Not needed
19	Preparation /use of audio visual materials	22	3.75	Needed
20	Skills to establish SPAT	10	1.25	N

The Intercept Theory of Training Needs Identification

Over the years, several theories of training needs identification have been proposed and practised by organizations. The three popular theories are skill–gap analysis; man, organizational and occupational analysis; and critical incident theory. Wentling (1992) describes the skill-gap analysis as a process which involves understanding the current skill levels of those who need training in order to focus on the desired and important skills. It involves analysis of the potentials of the staff in relation to the task to be carried out, stating each task and using the professional judgments of individuals (supervisors) in determining the extent to which the extension staff already have the skills; and developing a test or performance measures and administering them to the extension agents. McGee and Paul (1961) describe the organizational analysis, job or occupational analysis, and man or self analysis as methods of training needs identification. Organizational analysis involves studying the whole organization including the objectives, resources and allocation as a basis for determining where training emphasis should be placed. It also involves the analysis of deficiency indices and organizational climate through direct and indirect indices. Direct indices include observation of employees' behavior, opinions or attitude surveys and interview. The indirect indices include conflicts such as strikes, lockouts and complaints, labour turnover, absenteeism, productivity and accident records. Job or occupational analysis focused on the specific behavior required if the job is to be done effectively. The steps to be followed are determining the blocks in an occupation. These include the major segments or types of work, determining the knowing units, doing units, listing the steps in a doing unit and outlining the knowing units. The knowing units should be broken down into major and minor headings with information points to be covered under each heading. Man analysis focuses on the individual in terms of knowledge, skills and attitude required in the present position and possible future positions. Flanagan (1954) describes the critical incident technique of identifying training needs. It is used for collecting direct observation of behavior in order to solve practical problems. The incident to be noted reveals the subject's behavior at work rather than his general traits and must be described accurately, comprehensively, objectively and must arise from observation of specific situations, for example, a missing file.

The above three theories are cumbersome and time consuming. In the present study the intercept theory can be deduced (fig 1)



EAs- Extension Agents
BES- Block Extension Supervisors

The intercept theory stipulates that the needs agreed by both extension Agents and Block Extension Supervisors based on the job description of the Extension Agents should be reduced or solved through training before embarking on other needs. The process involves rating of staff (trainee or beneficiary) by super-ordinate staff (supervisors). Colleagues and other stakeholder can be involved in rating the training needs. In this study the use of colleagues was attempted but the results were biased. In fig. 1, the training needs that fell within the intercepts were those with serial number 3,6,10,12,14,16 and 17. These 7 training needs out of the universe of 20 call for immediate implementation for the purpose of improving the job performance of extension agents in the study area. The training needs are script writing, audience analysis, teaching/communication skills, Participatory Rural Appraisal, Techniques for GMO foods production, computer appreciation/skills, and use of multi-media projector. The training need with serial number 7 was agreed to only by the Extension Agents while training needs with serial numbers 5,8,11 and 19 were agreed to only by the Block Extension Supervisor.

CONCLUSION

Training is important for organizational effectiveness and survival in a world of ever changing technologies. A cursory approach for identifying training needs involves the rating of training needs by the intended beneficiaries and supervisors. The training needs agreed on by both supervisors and intended beneficiaries should be implemented before other needs. The intercept theory of identifying training needs is recommended to agricultural extension organizations for identifying training needs of Agricultural Extension Agents.

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