



**JOB RESPONSIBILITIES AND COMPETENCY AMONG EXTENSION WORKERS  
IN EDO STATE, NIGERIA: IMPLICATION FOR COMMUNICATION**



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**Abstract:** The study focused on Job responsibilities and competency among extension workers in Edo State Nigeria. Questionnaire was used to obtain data from 100 extension workers and was analyzed using Frequency count, percentage, mean standard deviation and logit regression for the hypothesis testing. Findings from the study revealed that majority (50.0%), (63.0%), (59.0%) and (51.0%) were between 41 and 50 years males, OND holders and had household size of between 5 and 8 persons respectively while a higher proportion (33.0%) had working experience of between 11 and 15 years, with a mean of 14 years. The study also revealed that age of the respondents with value of parameter estimated as (0.06), working experience (0.15), years of training (0.14), were significantly related with the competency level of extension workers at 0.05 level. The study thus recommended that Extension Organizations should organize frequent training in other to improve in areas of Job responsibilities where extension workers lack competence.

**Keywords:** Competency, extension workers, job responsibilities

**Introduction**

The effectiveness of an organization depends on its capability to attain and efficiently use existing resources to achieve its goals; agricultural organization inclusive. The performance of Nigeria agricultural sector has been describe as being less than satisfactory simply because of the inability to meet up with the increasing food demand of the expanding population (CBN, 2000). Several factors are responsible for this among which are government neglect in favour of petroleum sector, use of obsolete or traditional farm technologies, incontinency in weather patterns, ineffective machinery, pest and disease among others (William *et al.*, 1990; Uwakeh *et al.*, 1991; Ajayi, 2002; Alakpa and Onemolease, 2014). This situation has led to the questioning of the capabilities, proficiencies, and competencies of the agricultural extension workers (Harder and Dooley, 2007). The job competency of extension workers is a vital resource for agricultural development. Focusing on competencies helps extension organizations effectively communicate the responsibilities, knowledge, and skills needed for positions to their employees. Liles and Mustian (2004), confirm this notion that competencies, to be effective, need to be developed to support the mission and goals of the extension organization. A continuous development of competencies is necessary for professionals to stay in touch with the socioeconomic and technological changes in their fields, Hence job responsibilities and competencies among extension workers in Edo State Nigeria, is a researchable issue. Ensuring effective job competencies among extension workers can serve as a means for improving the dwindling agricultural sector in Nigeria through effective planning, and dissemination of research based information about improved inputs and technologies as observed by Onemolease and Okoedo-Okojie (2005). (Okoedo-Okojie and Alakpa, 2014) noted that it is an important task for extension agents to be involved in the planning, implementing and facilitating, teaching/learning experiences of farmers and also to develop and improve learning resources and activities through which farmers will practice and adopt improved and proven technologies. Therefore, the specific objectives of the study were to: describe their socio-economic activities; examine areas of job responsibilities of extension workers in the study area; and also examine competency in carrying out their job responsibilities.

**Materials and Methods**

The study was conducted in Edo State Nigeria. Edo State is located in the south-south geo-political zone of the country.

The state has two major vegetation belt namely; the rain forest belt in the south and central parts, while the guinea savanna is predominant in the northern part.

The major agricultural activities of the state include the cultivation of crops such as yam, cassava, maize, rice (in Esan), Cocoa, Oil Palm, rubber, pineapple, cashew, mango, kola, avocado pear and also wood products. There is extensive rearing of livestock, like sheep, goat, and pig and intensive rearing of poultry. The Agricultural Development Programme (ADP), the Nigeria institute for Oil Palm Research (NIFOR), and the Rubber Research Institute of Nigeria (RRIN) in the State is evidence of agricultural resources and activities. There are eighteen (18) supervisors, fifty-one (51) cells extension agents, forty-two (42) Fadama facilitators in Agricultural Development Programme (ADP). A list of 28 job responsibilities was provided for extension workers' responses. Level of Competence in job responsibilities was measured in a four (4) point rating scale of high (Competence in 22 or more job responsibilities) coded 4, high (competence in 15-21 job responsibilities) coded 3, average (competence in 8-14 job responsibilities) coded 2, and low (competence in 1-7 job responsibilities) coded 1. A mean score of 2.50 was taken that respondents were competent in a particular job responsibility. Hence, a total of 111 extension workers were selected for the study. Only (90.1%) questionnaire was found useful for analysis. Frequency count, percentage, standard deviation, means and logit regression were employed for data analysis. The t-statistics in logit regression model was used in hypothesis testing. A null hypothesis formulated for the study is; there is no significant relationship between personal characteristics of respondents and their level of competence in their job responsibilities.

The relationship explicitly express as:  
 $Y_i = f(X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, e_i) \dots \dots \dots (1)$

- Where:**  $Y_i$  = level of competency in Job responsibilities (High=1; Low=0)- dependent variable  
 $X_1$  = age of respondents (years)  
 $X_2$  = household size  
 $X_3$  = educational level (years of education)  
 $X_4$  = farming experience (years) for farmers and working experience for the researchers and extension agents  
 $X_5$  = farm size for farmers  
 $X_6$  = annual income (Naira)  
 $X_7$  = income from other productive activities (Naira)  
 $X_8$  = sex (Male= 1, female= 0)  
 $X_9$  = source of labour  
 $e_i$  = error term

The logit model according to Aldrich and Nelson (1984) is expressed as:

$$P(Y_i=1/x_i)=\exp(\sum b_k X_{ik}) / (1 + \exp(\sum b_k X_{ik})) \quad (2)$$

$i=1, \dots, N; \quad K=1, \dots, 9$

**Results and Discussions**

**Socio-economic characteristics of respondents**

The result showed that a higher proportion (50.0%) of respondents were between 41-50 years with a mean of 43years. This means that the respondents were relatively young. This finding agrees with Ensle (2005) for United States Agriculture extension workers. Higher proportions (63.0%) of respondents were male extension workers, (33.0%) had a working experience of between 1 and 15 years, and (51.0%) had household size of between 5 and 8 persons in the study area. Majority (55.0%) of respondents had tertiary education with (59.0%) having Ordinary National Diploma (OND) as their highest qualification. This result is expected, given that Ordinary National Diploma (OND) is the basic qualification for employing field staff into public extension service in Nigeria. This finding tend to confirm the assertion that Nigeria extension is a low status job fit only for job applicants possessing low academic qualifications (Ejembi, 2006).

**Area of job responsibilities of respondents**

Table 2 shows the areas of job responsibilities of respondents in the study area. The results show that majority, (64.0%) of respondents arouse farmers to take interest and recognize their problems, followed by (63.0%) of respondents who were involved in assisting farmers to overcome farm and personal problems, (51.0%) of respondents are involved in linking farmers and research institutions. The findings are indication that extension workers are knowledgeable in agricultural extension principles and apply them as the principles translate into responsibilities carried out by extension workers. These areas of job responsibilities are in line with the extension education principles of grass root approach; principles of interest and needs; principles of learning by doing as noted by Barman *et al* (2004). The implication of this result on communication is that knowledge in agriculture is a basic tool in extension service that must be acquired by extension worker in the process of information dissemination which is

translated by means of communication by extension agents in other to awaken the interest of the farmers in the process of adoption of technologies.

**Table 1: Frequency distribution of respondents according to their socio- economic characteristics**

Characteristics	Freq.	%(n=100)	Mean
<b>Age (Years)</b>			
30 & below	5	5.0	46
31-40	19	19.0	
41-50	50	50.0	
51-60	25	25.0	
61-70	1	1.0	
Total	100	100.0	
<b>Sex</b>			
Male	63	63.0	
Female	37	37.0	
Total	100	100.0	
<b>Education qualification</b>			
JSS	3	3.0	
SSCE	35	35.0	
OND	59	59.0	
B.SC	1	1.0	
HND	-	-	
M.SC	2	2.0	
Total	100	100.0	
<b>Household size</b>			
1-4	46	46.0	5
5-8	51	51.0	
9-12	3	3.0	
13-16	-	-	
Total	100	100.0	
<b>Working experience (years)</b>			
1-5	8	8.0	14
6-10	26	26.0	
11-15	33	33.0	
16-20	11	11.0	
21-25	17	17.0	
>25	5	5.0	
Total	100	100.0	

Source: Field Survey, 2017

**Table 2: Distribution of respondents by area of job responsibilities**

Job responsibilities	Frequency	%
Arouse farmers to take interest and recognize their problems	64	16.0
Assist farmers to overcome farming and personal problem	63	15.0
Facilitate conditions for adaptive research	28	8.0
Arouse the enthusiasm of researcher in their basic responsibilities	28	8.0
Develop farmers training program	30	10.0
Linking farmers and research institutions	51	12.0
Organized training	40	10.0
Adapt programmes developed at area, zones and headquarters to village situation	46	6.0
Liaise with supervisor to develop annual plan of work	40	10.0
Determine programme objectives	39	9.0
Keep regular touch with local leaders	21	11.0
Transformation of attitude and behavior of farmers	28	8.0
Setting programmes priorities	08	8.0
Facilitate conditions for basic research	30	3.0
Influencing farmers adoption of innovation that will bring about positive change in farmers standard of living	30	3.0
Develop key programmes activities	30	3.0
Persuading farmers to act on teaching aimed at improving their farming techniques	30	3.0
Sustaining consciousness in existing issues	28	2.0
Influencing farmers decision making that will bring about positive change in his behavior	28	2.0
Organize extension Advisory committee	28	1.0
Teach recommended practices to farmers with the objective of promoting mass adoption of such practices	28	1.0
Impact knowledge and skills	28	1.0
Raising farmers awareness of problem Situations	28	1.0
Help define farmers problems	32	1.0
Encourage farmers to ask question relating to their problems	32	1.0
Attend training	32	1.0

Source: Field Survey 2017

Table 3: Respondents' current level of competency in job responsibilities in Edo State

Competency	M	SD
Provision of relevant information to farmers	2.72*	1.23
Encourage farmers to ask question relating to their problems	2.78*	1.17
Work with farmers to develop extension programmes to meet their identified needs	2.68*	1.10
Impact knowledge and skills	2.58*	1.20
Raising farmers awareness of problem situations	2.61*	1.10
Assist farmers to overcome farming and personal problems	2.80*	1.14
Teach recommended practices to farmers with the objective of promoting high adoption of such practices	2.61*	1.13
Arouse farmers to take interest and recognize their problems	2.78*	1.06
Persuading farmers to act on teaching aimed at improving their farming techniques	2.54*	1.20
Influencing farmers decision making that will bring about positive change in his behavior	2.52*	1.22
Influencing farmers adoption of innovation that will bring about positive change in farmers standard of living	2.53*	1.14
Help define farmers' problems	2.54*	1.19
Keep regular touch with local leaders	2.52*	1.20
Attend training with farmers and local leaders	2.50*	1.10
Help farmers in sustaining consciousness in existing issues	2.43	1.21
Transformation of attitude and behavior of farmers	2.46	1.14
Liaise with supervisor to develop annual plan of work	2.40	1.20
Organized training for farmers and local leaders	2.25	1.20
Setting programmes priorities	2.33	1.12
Linking farmers and research institutions	2.27	1.25
Develop key programmes activities	2.22	1.09
Adapt programmes developed at area, zones and headquarters to village situation	2.25	1.09
Arouse the enthusiasm of researcher in their basic responsibilities	2.28	1.17
Develop farmer training program	2.17	1.18
Determine programmes objectives	2.19	1.10
Facilitate conditions for basic research	2.35	1.18
Facilitate conditions for adaptive research	2.20	1.17
Organize extension advisory committee	2.16	1.12

\*multiple responses

**Competency in job responsibilities of extension workers**

Table 3 shows respondents' competency in extension service. The information in the table reveals that respondents were competent in assisting farmers in overcoming farm problems with a mean score of (Mean=2.80), followed by encouraging farmers to ask question relating to their problems (Mean=2.78), arouse farmers to take interest and recognized their problems (Mean=2.78), provision of relevant information to farmers (Mean = 2.72), work with farmers to develop extension programmes to meet their identified needs (Mean=2.68), raising farmers awareness of problem situation (Mean=2.61). These findings suggest that extension workers with higher competence in a particular job responsibility have the ability to effectively discharge his/her duties than extension workers with low competence. Competency in job responsibilities by extension worker, could lead to high rate of adoption of technologies by farmers. Implication on communication is that through effective dissemination of information by extension worker to farmers, competencies in job responsibilities of extension worker could be attained which could be translated in the attitude and skills of the famers. This agrees with Boyd (2003), who suggested that extension organization should considered employees acquisition of competencies as an important part of their accomplishment.

**Hypothesis**

**Relationship between respondents' personal characteristics and their level of competence in their job responsibilities**

Logit regression model was used to analyze the extension workers personal characteristics and their level of competence in their job responsibilities. The likelihood ratio test which is 15.31 is significant at 0.05% level which implies that the model containing the independent variables is better at explaining the competency level of extension workers. The goodness of 227.659 is not significant at 0.05%. The non-

significant value implies that the data used for the analysis is appropriate. The pseudo R-Square (0.599) which implies that the independent variable of the model account for 59.9% of the variation observed in the competency needs of the extension workers. Based on the critical value at 5% level which is (t=1.96) the result as shown in the table below, only three (3) variables shows significant relationship with the competency level of the extension workers which are age; working experience and years of training. The coefficient of age is positive (0.062) which implies that older extension workers were more likely to have higher competency level in their job responsibilities than the younger extension workers. The odd ratio (1.064) means that old workers are 6.4% more likely to fall under the higher competency need category than the younger workers. The coefficient of working experience was negative (-0.153) which implies that, extension workers with less working experience were more likely to have higher competency need than those with longer working experience. The odd ratio was (0.58). The implication of this is that, extension workers with less working experience were 15.3% more likely to have higher competency need than those with more working experience.

Similarly, the result for years of training is negative which is -0.136. This implies that extension worker with less years of training were more likely to have higher competency need than those with more years of training. The odd ratio which is 0.873 actually implies that extension workers with less years of training were 14.5% more likely to have higher need for training than those with more years of training. The result for sex, household size, and educational qualification were not significant since the calculated t-values was less than 1.96 which is the critical t-value. Similar to these findings, Burke (2002) reported that extension agent's level of knowledge, importance, and use of competencies did not vary with their gender, education, ethnic background and job responsibilities except for age, years of experience and period of training.

Owen (2004) suggested that a long term professional development plan can be prepared by helping extension professionals to conduct self-evaluation in early years of tenure ship to ensure development of competencies.

**Table 4: Relationship between respondents' personal characteristics and their level of competence in their job responsibilities**

Characteristics	Odd ratio	Coefficient	t
(Constant)	0.864	-0.146	-0.131
Age	1.064	0.062*	2.296
Sex	1.339	0.292	0.832
Education qualification	0.906	-0.099	-0.427
Household size	0.999	-0.001	-0.033
Working experience	0.858	-0.153*	-2.354
Years of training	0.873	-0.136*	-2.473

\*p=0.05

-2 Log Likelihood = 15.31; df = 7; p<0.050

Goodness-of-Fit (Chi-Square) = 227.659; df 220; p>0.050

Pseudo R-Square = 0.599

### Conclusion and Recommendation

The results indicate that most of the respondents in the study area arouse farmers to take interest and recognize their problems, assist farmers to overcome farming and personal problems, facilitate condition for basic research and adaptive research; arouse the enthusiasm of researchers, organizing farmers training programs as their major job responsibilities in extension delivery services. he result from the analysis reveal that extension workers in the study area were more competent in some of their job responsibilities which includes; assisting farmers to overcome their problems, encouraging farmers to asked questions relating to their problems, arouse farmers to take interest and recognize their problems.

Other job responsibilities with competence includes; working with farmers to develop extension programmes to meet their identified needs, impact knowledge and skills, raising farmers awareness of problem situations, teach recommended practices to farmers with the objective of promoting mass adoption of such practices, persuading farmers to act on teaching aimed at improving their farming techniques, keep regular touch with local leaders, attending training, help define farmers problem. Job responsibilities with no competence by extension workers in Edo States includes; sustaining consciousness in existing issues, transformation of attitude and behavior of farmers, liaise with supervisors to develop plan of work, organized training, setting programme priorities, linking famers and research institutions, develop farmers training programme, determine program objective, facilitate conditions for basic research, facilitate conditions for adaptive research and organize extension advisory committee. Although extension workers in Edo State had a high competence level in some areas of their job responsibilities, there is need for improvement to gain more competence in other areas of their job responsibilities where they lack competence. Areas of job responsibility where extension workers in Edo state need to gain/improve their competence includes: transformation of attitude and behavior of farmers; liaise with supervisors to develop annual plan of work; sustaining consciousness in existing issues; organizing training for farmers and local leaders; setting programme priorities; linking farmers and research institutions; adapt programmes developed at area, zones and headquarters to village situation; arouse the enthusiasm of researchers in their basic job responsibilities; develop farmers training programme; determine program objectives; facilitates conditions for adaptive research; facilitate conditions for basic research; organize extension advisory committee. Implication

on communication; the competency of extension workers in extension services cannot be overemphasized as competency in job responsibilities is key in the field of extension services delivery. Effective information dissemination and good communication with farmers could be translated in attitude change and lifestyle of the farmers which will in turn be attributed to the competency of extension agent in extension service delivery. The study thus recommended that Extension Organizations should organize frequent training in other to improve in areas of Job responsibilities where extension workers lack competence.

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