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KNOWLEDGE AND UTILIZATION OF JOB ENRICHMENT TECHNIQUES AMONG AGRICULTURAL EXTENSION MANAGERS IN BOTSWANA AND NIGERIA

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Abstract

This paper examined the knowledge and utilization of job enrichment techniques among agricultural extension managers in Botswana and Nigeria based on the fact that there is need diversification of the economy from being mineral dependent and agricultural extension is faced with limited funds and manpower to carry out its functions. Structuring jobs and roles correctly is very important in elevating the motivation of employees, which is addressed by job enrichment which is an important ingredient to reinforce the motivational factors.

Using a random sampling technique, this study examined the knowledge and utilization of job enrichment techniques among extension managers in the two countries. Data were collected with a structured questionnaire that has a reliability coefficient of 0.85 using the split-half technique and were analyzed with frequency counts, percentages, multiple regressions and t-test. The result shows that the knowledge and utilization of job enrichment techniques were low among managers in the two countries. Important predictors of job enrichment utilization are information sources on job enrichment, educational level, age and years of experience. A significant difference exists in the knowledge of job enrichment techniques between Botswana and Nigeria. The paper recommends that training should be provide to extension manger on job enrichment and other job related concepts in order to improve performance of their subordinates. The paper has shown how extension managers can be more effective without additional resources due to the fact that resources available for public extension managers are increasingly reduced.

Key Words: Job Enrichment, Agricultural Extension Managers, Job Motivation, Job Performance, Botswana, Nigeria.

INTRODUCTION

Nigeria and Botswana are countries in Africa with mineral dependent economy, while Nigeria sits on crude oil from which most of the foreign earning are derived, in the case of Botswana, diamonds has been the main foreign exchange earner. However, the prevalence of improper management and corruption in Nigeria have made the huge foreign income of no impact on the whole populace while macroeconomic stability and prudent use of diamond export earnings have catapulted Botswana, a low-income country half a century ago, to its current status as an upper middle-income country. Efforts to create a more diversified economy, however, have so far had little success, with mining – largely diamonds – still accounting for a large share of domestic output and almost all exports. Botswana has been among the fastest-growing economies in Africa over the past 40 years (AfDB/OECD, 2007, 2008). The realization of the fact that diversification of the economy is an urgent imperative stressed the recognition that the agricultural sector continues to play a vital role in these economies and retains the potential for economic diversification. As agrarian countries, the production of foods and other raw materials is a necessary ingredient for the take-off of all other sectors of the nation's economy. As a primary production sector, agriculture itself has to be modernized in order to achieve the much-needed

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increase in the productivity of the sector. This modernization has been through high government annual investments in agricultural research and extension services.

In Botswana, the current agricultural extension system has evolved over the past 60 years and has existed under various organizational structures. The department of agriculture was established in 1935 to conduct research and extension on crop and pasture agronomy and from 1935 to 1947 the extension approach used was Foremen farmers whereby Africa foremen were appointed to assist and advise farmers (Mrema, 1996). However it was changed in 1947 to Cooperative Demonstration Plot Scheme (CPDS). From 1962, the CPDS scheme was abandoned and the Pupil farmer scheme that was in use in Rhodesia was adopted and continued until the 1970s. In 1972 the Integrated Rural Development Programme (IRDP) was proposed and Extension services focused on commercial rather than subsistence farmers thus limiting coverage. Subsequently, farming system approaches were adopted and programmes such as Arable Land Development Programme (ALDEP) and Livestock Management Infrastructure Development Project (LMIDP) Irrigation and Water Development Project, Development of Extension Services, Dairy Improvement, and other agricultural projects funded under the Financial Assistance Policy, have been introduced with the objective of assisting farmers with input to increase their productivity (MOA 2006). Currently the programme in place is the National Master Plan for the Arable Agriculture and Dairy Development (NAMPAADD) which seeks to improve the performance of the agricultural sector, by modernizing it through the introduction of improved technologies and efficient use and management of land and water resources and by commercializing it (MOA 2007).

The current extension system in Botswana is geared towards all farmers. At the grassroots level, farmers are assisted by agriculture demonstrators (agricultural extension agents) who on average cover 300 to 1000 farm families. The agricultural extension agents report to the District Agricultural Officers (DAOs). The District Agricultural Officer, principals for Rural Training Centres (RTCs) and regional support staff report to the Regional Agricultural Officer (RAOs) who in turn reports to the Director, Crop Production and Forestry. The DAOs supervise an average of 11 agriculture demonstrators in each of the districts. With the problems of low extension agent farmer ratio, there is need for the use of job enrichment technique which is a type of job redesign intended to reverse the effects of tasks that are repetitive, requiring little autonomy such as boredom, lack of flexibility, and employee dissatisfaction. It also supports positive attitudes towards work by reinforcing motivation factors.

In Nigeria, the period of 1893–1921 marked the beginning of scientific agriculture in Nigeria and the beginning of direct government involvement in agricultural development. Extension delivery even at that stage had the dual but conflicting roles of education and enforcement. Agricultural development was seen as a government instrument for implementing agricultural extension programmes and a number of agricultural programmes were implemented as frequently as the government changed. These include Farm Settlement Scheme, National Accelerated Food Production Programme Operation Feed the Nation, River Basin Development Authority, Green Revolution, and Agricultural Development Project (ADP). The Training and Visit (T&V) extension methodology for transfer of new technology was adopted. A major feature of the Nigerian agricultural extension service in the recent past is the entrance of non-governmental organizations and pluralistic extension delivery. More recently, through the assistance of CTA, information communication support and farmer resource centers were established to explore the use of ICTs in extension delivery (FMNAR, 1997, Arokoyo, 2003). The ADP is one of the outstanding programmes that has contributed immensely to the transformation of the Nigerian agriculture. By 1989, all the states of the Federation had ADPs. Each state ADP in Nigeria employs the services of extension agents to discharge its agricultural extension functions in their respective states. To ensure success and survival, it is expected that the ADPs attract, secure and retain extension agents who are properly oriented and committed to their policies, mandate and objectives. Each of the statewide ADP was run by a professionally managed semi-autonomous agency, linked to a state Ministry of Agriculture, through a Coordination Committee representing the state government. The withdrawal of the World Bank loan for the support of ADPs and the non-constant funding by the Federal and State governments, led to shortage of fund and delay in recruiting the full complement of staff. Consequently, there is slower implementation than expected at appraisal (Ehien et al 2004).

The effectiveness of extension services is dependent upon the motivation of its employee, (Chesney, 1992, Buford, 1990, Smith 1990). Motivating employees is always one of every manager's goals as that makes employees contribute to productivity thus directly increasing profitability for the organization. Structuring jobs and roles correctly is very important in elevating the motivation of employees, which is addressed by job enrichment. Job enrichment therefore, is an important ingredient to

reinforce the motivational factors (Mallilo,1990). Some of the techniques of job enrichment identified include; removal of control, assignment of complete natural unit of work, re-distribution of power and authority, rotation of jobs, making report directly available and combination of tasks. Although, application of these techniques may take time and effort at the beginning, but like good training, it will pay off with more motivated employees who are willing to work hard and capable of working independently, this means improved motivation and job satisfaction (Merchant, 1999). The main objective of the study was to determine the knowledge and utilization of job enrichment techniques among agricultural extension managers in Botswana and Nigeria. Specifically, the personal characteristics were identified, knowledge and utilization of job enrichment techniques were ascertained and the sources of information on job enrichment techniques identified. Significant differences were examined between managers in the two countries and predictors of utilization of job enrichment techniques were isolated for each of the countries.

METHODOLOGY

The study was carried out in Botswana and Nigeria. Botswana is located on latitude 24° 45S and longitude 25° 55E with a land area of 582,000 square kilometers at the south of the Equator and dissected by the Tropic of Capricorn, Botswana is in both the eastern and southern hemisphere. It is bordered by South Africa to the south and southeast, Namibia to the west, Zambia to the north, and Zimbabwe to the northeast. In Nigeria, the study was carried out in South Western, agricultural zone of Nigeria, which consists of Delta, Ondo, Edo, Lagos, Ogun, Osun, Ekiti and Oyo states. The area lies between latitudes 4 and 14 south and longitude 2 and 8 east; they collectively cover 114,271km², of land, which is approximately 12%, of Nigerian's total land area. The Atlantic ocean, in the south binds it, in the east by River Niger, in the West by Republic of Benin and in the North by Kwara and Kogi States (NARP, 1995). The population of the study was all District Agricultural officers who are the extension managers (DAOs) in the 25 agricultural districts in Botswana while in Nigeria the population are managers and directors in the different departments of the ADP such as Women In Agriculture (WIA), Technical services, Zonal Managers, Crops, Communication, Livestock, Agro processing, Rural Infrastructure Development (RID), and Fisheries. Adebowale et al (2008) reported that there are 87 extension managers in south western agricultural zones based on the current staffing situation of the ADPs. A simple random techniques was used to select 20 DAO in Botswana and in Nigeria, firstly, five states (Lagos, Oyo Ogun Osun and Edo) were selected out of eight states and 48 managers from a total of 52 in the five states. Data were collected through the use of questionnaire that was face validated among experts in the Botswana College of Agriculture and University of Ibadan. Also, the questionnaire was subjected to reliability test using split-half technique with a coefficient of 0.85. A knowledge test was administered on the managers on the different job utilization was measured on a 2-point scale of True = 2 and False = 1 and similarly for utilization use = 2 non use = 1. Respondent were asked to indicate from a list of sources the information sources used on job enrichment techniques. Data collected were subjected to analysis using frequency counts, percentages and multiple regression analysis and t-test.

RESULTS AND DISCUSSIONS

The personal characteristics of respondents covered in the study are presented in Table 1, in Botswana, 80 percent of the DAOs are married and males which indicate the dominance of males in the extension service delivery profession. Also, 50 percent have BSc as their educational qualification. The educational level of many the DAO is low but with long years of working experience. About 75 percent are between 40 and 50 years of age and 65 percent had served for more than 20 years. Sixty percent have been DAO for 1 to 5 years. In terms of household size, 60 percent of DAO have 1 to 5 persons, while 90 percent are living in the job area only 10 percent are currently on higher studies. Subair (2008) reported similar findings in the study on perception of agricultural extension officers regarding the policies established by Ministry of Agriculture to strengthen agricultural extension services in Botswana.

In Nigeria, majority of the respondents (94%) are married, 81% are male. This disproportionate representation is also reflected in the findings of Oladele (2007) which indicated that there were only 14.7% women identified as engaged in agricultural extension services in south western Nigeria. Fifty percent have 6-10 persons per household, educational level of BSc and MPhil, however, only 29% are

currently studying for higher degree. This may be due to the fact that majority think they have reached the peak of their carrier. Majority of the respondents (56%) are between 41-50 years of age, 81% had spent between 10years and 20years above, which implies that majority of the managers have risen to the level based on experience over the years and large proportion of the extension managers (77%) live close to their office.

Table 1: Personal characteristics of respondents

Variables	Botswana	Nigeria
Marital status		
Single	3 (15)	2 (4.2)
Married	16(80)	45(93.8)
Divorced	1(5)	1(2.1)
Gender		
Male	16(80)	39(81.2)
Female	4(20)	9(18.8)
Educational level		
Ordinary Diploma	9(45)	5(10.4)
Higher Diploma	0 (0)	14(29.2)
Post graduate Diploma	0 (0)	5(10.4)
BSc	10(50)	9(18.8)
MSc	1(5)	15(31.3)
Age		
Less than 40 years	3(15)	13(27.08)
40-50 years	15(75)	27(56.22)
Above 50 years	2(10)	12(25.00)
Years of profession		
1-10 years	2(10)	9(18.75)
11- 20 years	5(25)	23(47.91)
Above 20 years	13(65)	16(33.33)
Household size		
1-5 persons	12(60)	24(50.0)
6-10 persons	7(35)	24(50.0)
Above 10 persons	1(5)	0(0)
Currently on higher studies		
Yes	2(10)	14(29.2)
No	18(90)	34(70.8)
Living in job area		
Yes	18(90)	37(77.1)
No	2(10)	11(22.9)

The results on the sources of information in Botswana show that prominent sources of information are advisory leaflets (75%), journals (75%), workshops (60%), bulletin (60%) and workshops and conferences (60%). The frequent supply of these information sources to the district offices might be responsible for this trend. On the other hand, internet and management training are the least used sources of information (55 percent each). This high percentage of non-use may be due to the DAOs who are in rural areas where internet facilities are lacking and the non frequency of management training for the DAOs. In Nigeria, 92% of the respondents indicated to use workshops, management training and colleagues (90%), and internet (60%) as sources of information on job enrichment techniques. The influx of the information communication technologies and the frequent invitation of managers for workshops and management meetings might be responsible for this result.

Table 2: Sources of Information on Job Enrichment Techniques

Information sources	Botswana		Nigeria	
	Yes	No	Yes	No
Internet	11(55)	9(45)	29(60.4)	18 (37.5)
Management training	11(55)	9(45)	43(89.6)	5(10.4)
Colleagues	8(40)	12(60)	43(89.6)	5(10.4)
Advisory leaflets	15(75)	5(25)	41(85.4)	7(14.5)
Bulletin	12(60)	8(40)	39(81.2)	9(18.8)
Journals	15(75)	5(25)	36(75.0)	11(25.0)
Workshops	12(60)	8(40)	44(91.7)	4(8.3)
Seminars/Conferences	12(60)	8(40)	40(83.3)	8(16.7)

From the list of 18 job enrichment techniques presented in Table 3, the knowledge test showed that all the respondents in Botswana (100%) have knowledge on techniques such as Assignment of new or specialized task will improve job motivation, removal of difficult parts of assignment will reduce workers productivity, Increasing performance target will improve job motivation and combination of various work activities to provide a challenging work assignment to improve job performance. Also 95 percent of the respondents got right their responses on rotating assignments among subordinates will improve self confidence on the work, implementing participative management will create interesting work environment, encouraging increased use of skill variety will improve job satisfaction, provision of employees with the feeling that they are personally contributing to the organization will improve job performance and increasing direct feedback to employees on matters that concern them will improve job motivation. Conversely, respondent have low knowledge of techniques such as removal of control of a subordinate will improve job satisfaction (10%), assign a complete unit of work that can be done by subordinate without following job procedure will improve job satisfaction (35%), provision of additional authority to subordinate will reduce job performance (25%) and assignment of highly specialized task to subordinate will not boost their morale(35%). The knowledge test has highlighted areas of training needs for the DAOs.

In Nigeria, the top three job enrichment techniques that extension managers have knowledge of are: implementing participative management (96%), increasing direct feedback (96%) and rotating assignments among subordinates (94%) while removal of control (100%), assignment of complete unit of work(88%) and increasing performance target (50%) are the least three job enrichment techniques the managers are knowledgeable about. The efforts by managers to be democratic and gain credibility among their workers could be attributed to the prominence of these enrichment techniques.

Table 3: Knowledge of Job Enrichment Techniques

JOB ENRICHMENT TECHNIQUES	Botswana		Nigeria	
	True	False	True	False
Removal of control of a subordinate will improve job satisfaction	2(10)	18(90)	0(0)	48(100.0)
Assign a complete unit of work that can be done by subordinate without following job procedure will improve job satisfaction	7(35)	13(65)	6(12.5)	42(87.5)
Provision of feedback directly to employee by supervisor will boost their morale	12(60)	8(40)	45(93.8)	3(6.2)
Assignment of new or specialized task will improve job motivation	20(100)	0(0)	42(87.5)	6(12.5)
Rotating assignments among subordinates will improve self confidence on the work	19(95)	1(5)	45(93.8)	2(4.2)
Implementing participative management will create interesting work environment	19(95)	1(5)	46(95.8)	1(2.1)
Removal of difficult parts of assignment will reduce workers productivity	20(100)	0(0)	35(72.9)	13(27.1)
Increasing performance target will improve job motivation	20(100)	0(0)	23(47.9)	24(50.0)
Provision of additional authority to subordinate will reduce job performance	5(25)	15(75)	38(79.2)	9(18.8)
Assignment of highly specialized task to subordinate will not boost their morale	7(35)	13(65)	32(66.7)	14(29.2)
Reduction of control of a subordinate will improve job satisfaction	14(70)	6(30)	20(41.7)	26(54.2)
Encouraging increased use of skill variety will improve job satisfaction	19(95)	1(5)	43(89.6)	3(6.2)
Increasing the amount of recognition for doing a job well will reduce job performance	14(70)	6(30)	39(81.2)	9(18.8)
Involvement of subordinate in the identification and solution of problems that affect them and the organization will increase job dissatisfaction.	18(90)	2(10)	25(52.1)	22(45.8)
Provision of employees with the feeling that they are personally contributing to the organization will improve job performance	19(95)	1(5)	44(91.7)	3(6.2)
Combination of various work activities to provide a challenging work assignment will improve job performance	20(100)	0(0)	38(79.2)	10(20.8)
Increasing direct feedback to employees on matters that concern them will improve job motivation	19(95)	1(5)	46(95.8)	2(4.2)
Creation of autonomous work teams with responsibility and authority will reduce confidence	17(85)	3(15)	36(75.0)	11(22.9)

In Table 4, out of the 16 listed job enrichment techniques, respondents in Botswana indicated that the most prominently used techniques are removal of difficult section of assignments (85%), provision of employees with the feelings of belongingness (80%) and combination and /or rearrangement

of tasks to be more challenging (80%). On the other hand, respondents do not use provision of feedback directly to employee by supervisor (90%), removal of control of a subordinate (70%), adjusting performance target (65%) and increasing the degree of decision making of subordinates (60%). In Nigeria, the three top job enrichment techniques that are used by extension managers are: provision of employees with the feelings of belongingness (60%), increasing the amount of recognition for a job well done (58%), and assignment of new or specialized task (50%) while job enrichment techniques rarely used are: assignment of complete unit of work that can be done by subordinates (73%), removal of control of a subordinates (63%), and removal of difficult section of assignment(54%). The use of these techniques will among other things depend on the prevailing circumstances in the work environment.

Table 4: Utilization of Job Enrichment Techniques

Techniques	Botswana		Nigeria	
	Yes	No	Yes	No
Removal of control of a subordinate	6(30)	14(70)	18(37.5)	27 (56.2)
Assign a complete unit of work that can be done by subordinate without following job procedure.	7(35)	13(65)	12(25.0)	35(72.9)
Provision of feedback directly to employee by supervisor	2(10)	18(90)	43(89.6)	5(10.4)
Assignment of new or specialized tasks	15(75)	5(25)	40(83.3)	7(14.6)
Rotating assignments or job schedules	9(45)	11(65)	44(91.7)	4(8.3)
Implementing participative management	12(12)	8(40)	44(91.7)	3(6.2)
Removal of difficult section of assignments	17(85)	3(15)	31(64.6)	17(35.4)
Adjusting performance target	7(35)	13(65)	35(72.9)	12(25.0)
Reduction of control of a subordinate	13(65)	7(35)	35(72.9)	12(25.0)
Provision of additional authority to subordinates	13(65)	7(35)	34(70.8)	14(29.2)
Increasing the degree of decision making of subordinates	8(40)	12(60)	43(89.6)	4(8.3)
Encouraging increased use of initiatives	13(65)	7(35)	47(97.9)	2(4.2)
Increasing the amount of recognition for a job well done	14(70)	6(30)	46(95.8)	2(4.2)
Involvement of subordinates in the identification and solution of problems that affect them and the organization	14(70)	6(30)	46(95.8)	2(4.2)
Provision of employees with the feelings of belongingness	16(80)	4(20)	46(95.8)	2(4.2)
Combination and/or rearrangement of tasks to be more challenging	16(80)	4(20)	45(93.8)	3(6.3)

The result of the multiple regression analysis of relationships between selected demographic characteristics and utilization of job enrichment techniques is presented in Table 5. In Botswana, the independent variables are significantly related to the use of job enrichment techniques with F value of 2.33, $p < 0.05$, also the R value of 0.739 shows that there is a strong correlation between the independent variables and the use job enrichment techniques and predicted 54 percent of the variation in the use of job enrichment techniques by the DAOs. Significant determinants are number of information sources ($t = 2.79$), educational level ($t = 2.07$), age ($t = -2.86$) and years of experience ($t = 2.89$). It implies that the more the number of information sources the DAOs are exposed the more their use of job enrichment techniques. Also, the higher the educational level of DAOs the higher the use of job enrichment techniques. When managers have long experience their use of job enrichment techniques would increase. However, as the age of DAO increases, their use of job enrichment decreases. In Nigeria, the independent variables are significantly related to the use of job enrichment techniques with F value of 2.33, $p < 0.05$. Also the R value of 0.84 shows that there is a strong correlation between the independent variables and the use job enrichment techniques and predicted 75 percent of the variation in the use of job enrichment techniques by the managers. Significant determinants are number of information sources ($t = 3.02$), years of experience ($t = 2.89$).

Table 5: Multiple regression analysis of relationships between demographic characteristics and utilization of job enrichment techniques

Variables	Botswana	Nigeria
	B (SE)	
(Constant)	74.384 (32.21)*	74.38(32.2)*
Information sources	0.68(.236)*	0.65(0.23)*
Knowledge	-1.41(.749)	-1.41(0.74)
Marital status	3.98(5.03)	3.98 (5.03)
Gender	6.13(4.52)	6.13(4.52)
Educational level	-1.469(.70)*	0.59(1.39)

Age	-0.309(.11) *	-0.30(0.158)
Years of experience	0.661(.228) *	0.67(0.22) *
Household size	.59(1.39)	1.69(4.19)
On-going higher studies	-6.64(4.33)	0.212(0.12)
Residence's closeness to job location	1.38(4.02)	-4.49 (3.54)
F	2.333	3.33
p	0.021	0.021
R	0.739	0.84
R Square	0.546	0.75

In Table 6, significant differences in the utilization of job enrichment techniques, number of information sources and knowledge in Botswana and Nigeria were determined. The result showed that a significant difference exist only in terms of knowledge ($t = 6.34$, $p < 0.05$) while no significant difference was recorded for utilization of job enrichment techniques and number of information sources. This shows that managers may unconsciously be using some of the job enrichment techniques in their managerial activities but might not have recognized them as job enrichment techniques.

Table 6: t-test showing difference in utilization, number of information sources and knowledge in Botswana and Nigeria

Variables	Country	N	Mean	Std. Deviation	Std. Error Mean	t	df	p
Utilization	Botswana	20	35.40	16.74	3.74	1.72	19	0.10
	Nigeria	48	28.87	4.01	0.58			
Number of information sources	Botswana	20	14.70	9.33	2.08	0.17	19	0.86
	Nigeria	48	14.33	2.01	0.29			
Knowledge	Botswana	20	34.45	2.48	0.55	6.34	19	0.00
	Nigeria	48	30.25	2.50	0.36			

CONCLUSION

The study has shown that extension managers in the two countries have low knowledge and low utilization of job enrichment techniques. The knowledge test has highlighted areas of training needs for the managers. There is also the dominance of males in the extension delivery profession. The educational level of many the managers is low but with long years of working experience, between 40 and 50 years of age and had served for more than 20 years. Prominent sources of information are advisory leaflets, journals, workshops, internet, colleagues, workshops and conferences. Significant determinants are number of Information sources educational level, age and years of experience. The study therefore recommends that policy makers should ensure that extension managers are exposed to various information sources in order to improve their access to information on job enrichment techniques. Also, managers should be encouraged to go for relevant higher studies as this would improve their competence and management of their subordinates. It is equally important that managers are motivated to stay sufficiently long enough on their job positions as this will help them to be able to manage their work force better.

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