

Full Length Research Paper

Knowledge and utilization of job enrichment techniques among district agricultural officers in Botswana

O. I. Oladele^{1*}, S. K. Subair² and N. V. Sebina²

¹Department of Agricultural Economics and Extension, North-West University, Mafikeng Campus, Mmabatho, South Africa.

²Department of Agricultural Economics, Education and Extension, Botswana College of Agriculture, University of Botswana, Gaborone, Botswana.

Accepted 17 August, 2010

In Botswana, agricultural extension services delivery is faced with problems of inadequate skilled manpower to carry out research and disseminate information to farmers and existing staff are not motivated to perform at optimum level, hence performance with productivity declines over time. Structuring jobs and roles correctly is very important in elevating the motivation of employees, which is addressed by job enrichment. Using a random sampling technique, this study examined the knowledge and utilization of job enrichment techniques among District Agricultural Officers (DAOs) in Botswana. Data were collected with a structured questionnaire that has a reliability coefficient of 0.85 and were analyzed with frequency counts, percentages correlation and multiple regressions. The result shows that the knowledge of job enrichment techniques was moderate among district officers. The use of job enrichment techniques was facilitated by the organization structure for extension delivery in Botswana. Important predictors of job enrichment utilization are information sources on job enrichment ($t = 2.79$), educational level ($t = 2.07$), age ($t = - 2.86$) and years of experience ($t = 2.89$). The paper recommends that training should be provided to DAOs on job enrichment and other job- related concepts in order to improve performance among extension agents.

Key words: Botswana, job enrichment techniques, motivation, performance, district officers knowledge.

INTRODUCTION

Mrema (1996) reported that 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. It therefore contained the present departments of crop production and forestry and agricultural research. In the period 1935 to 1947 the extension approach used was the so called Foremen farmers whereby Africa foremen were appointed to assist and advise farmers.

However, it was changed in 1947 to an approach called Cooperative Demonstration Plot Scheme (CPDS). Under this scheme selected farmers called cooperators had three plots on one acre each on which comparisons

could be demonstrated. Inputs were subsidized under the CPDS and farmers were expected to purchase their own inputs after three years. Many farmers discontinued the practice after three years when they got subsidies and did not transfer the new ideas to other plots though yield was higher on the demonstration plots than the other (FAO, 1990).

From 1962, the CDPS scheme was abandoned and the pupil farmer scheme that was in use in Rhodesia was adopted and continued until the 1970s. In this scheme farmers were required to join the scheme by applying and depending on their progress could be promoted through categories such as pupil, improved, progressive and master farmer. Emphasis in extension was on individual farmers and each agricultural district had 15 pupil farmers under their care. The problem of expanding the scheme to other farming households rather than the 15 - 20 pupil and improved farmers that were concentrated on discouraged the continuity of the scheme. In 1972 the Integrated Rural Development Programme (IRDP) was

*Corresponding author. E-mail : oladele20002001@yahoo.com.
Tel: +27183892746. Fax: +27183892748.

proposed and Extension services focused on commercial rather than subsistence farmers so the coverage was limited. In 1973 the Accelerated Rural Development Programme (ARDP) was implemented but the poor implementation capacity of Ministry of agriculture attributed to lack of manpower encouraged only the development of human resource capacity. Subsequently farming system approach was approached and programmes such as Arable Land Development Programme (ALDEP) and Livestock Management Infrastructure development Project (LMIDP), Irrigation and Water Development Project (IWDP), Development of Extension Services (DES), Dairy Improvement (DI), Pandamatenga developments and other agricultural projects funded under the Financial Assistance Policy (FAP), have been introduced with the objective of assisting farmers with input to increase their productivity (MOA, 2006). ALDEP has been Botswana's most important programme in support of smallholder dry land agriculture. The main emphasis has been on the promotion of a technology package by providing highly subsidised inputs to selected farmers. ALDEP started in 1982, financed by IFAD and ADB, running through to 1996. It is currently entering a 2nd phase entirely funded by the Botswana Government to run from 1997 to 2003.

The ALDEP phase three, like its predecessors will focus on strengthening of the extension services, technology transfer and adoption, training and supporting previous and current beneficiaries of the programme to utilize packages acquired. The target group for the programme is the resource poor farmers whose farming efficiency is hampered by inadequate resources. 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 DAOs, 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 (CPF). The DAOs supervise an average of 11 agriculture demonstrators in each of the districts. With the problems of many agriculture demonstrators leaving the job for other sectors and 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.

James (2008) reported that interesting work and employees' pay appear to be important links to higher motivation. Options such as job enlargement, job enrichment, promotions, internal and external stipends, monetary and non-monetary compensation should be considered. The effectiveness of extension services is dependent upon the motivation of its employee, (Chesney, 1992; Buford, 1990; Smith, 1994). For the agriculture demonstrators, the *status quo* remain the same, as there is no additional funding and facilities to increase the motivation of the extension agents. It is therefore important to look for other means of reinforcing the motivational factors.

Motivating employees is always one of every manager's goals. Motivated 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. Motivation has been defined by many contemporary authors, some of which include; the psychological process that gives behaviour purpose and direction (Kreitner, 1995); a predisposition to behave in a purposive manner to achieve specific unmet needs (Buford, Bedeian and Lindner, 1995); and an internal drive to satisfy an unsatisfied need (Higgins, 1994). Motivation has been defined in the context of an organization as the inner force that drives individuals to accomplish personal and organizational goals (James, 2008). To be effective as an organization, managers need to understand what motivates employees within the context of the role they perform. The act of motivating employee is very complex which is due, in part, to the fact that what motivates employees changes constantly (Beder, 1990; Watanabe, 1991). Job enrichment therefore, is an important ingredient to reinforce the motivational factors. 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. Anecdotal evidences suggest that a well motivated extension work force which is attainable through the use of job enrichment techniques would improve the effectiveness of extension services delivery.

The main objective of the study was to determine the knowledge and utilization of job enrichment techniques among DAOs in Botswana. Specifically, the personal characteristics were identified, knowledge and utilization of job enrichment techniques were ascertained and the sources of information on job enrichment techniques, an

Table 1. Personal characteristics of respondents.

Variables	Frequency	Percentages
Marital status		
Single	3	15
Married	16	80
Divorced	1	5
Gender		
Male	16	80
Female	4	20
Educational level		
Ordinary diploma	9	45
BSc	10	50
MSc	1	5
Age		
Less than 40 years	3	15
40-50 years	15	75
Above 50 years	2	10
Years		
1-10 years	2	10
11- 20 years	5	25
Above 20 years	13	65
Length on job position		
1-5 years	6	30
6-10 years	8	40
Above 10 years	6	30
Household size		
1-5 persons	12	60
6-10 persons	7	35
Above 10 persons	1	5
Currently on higher studies		
Yes	2	10
No	18	90
Living in job area		
Yes	18	90
No	2	10

constraints to the use of job enrichment techniques determined. Significant relationships were tested between the variables of the study.

METHODOLOGY

The study was carried out in Botswana which is located on latitude 24° 45S and longitude 25° 55E with a land area of 582,000 squares

kilometers at the south of the Equator and dissected by the Tropic of Capricorn, Botswana is in both the eastern and southern hemisphere. The Republic of Botswana is one of the countries in southern Africa. It is bordered by South Africa to the south and Southeast, Namibia to the west, Zambia to the north and Zimbabwe to the northeast. The economy, is closely tied to South Africa's, and is dominated by mining (especially diamonds), tourism, cattle, dry land farming and irrigated crop production (Figure 1). The populations of the study were all DAOs in the 25 agricultural districts in Botswana. A simple random technique was used to select 20 DAO. Data were collected through the use of questionnaire that was face validated among experts in the Department of Agricultural Economics (DAE), education and extension and the Ministry of agriculture in Gaborone. 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 DAO 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. The frequency of utilization was measured on a 3 point scale of frequently (all assignments) = 3, occasionally (some assignments) = 2 and rarely (none of the assignments) = 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.

RESULTS AND DISCUSSION

The personal characteristics of respondents covered in the study are presented in Table 1, eighty percent of the DAO 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. The results on the sources of information used by DAO shows 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 office 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 (Table 2). From the list of 18 job enrichment techniques presented in Table 3, the knowledge test showed that all the respondents (100%) have knowledge on techniques such as assignment of new or specialized task will improve job

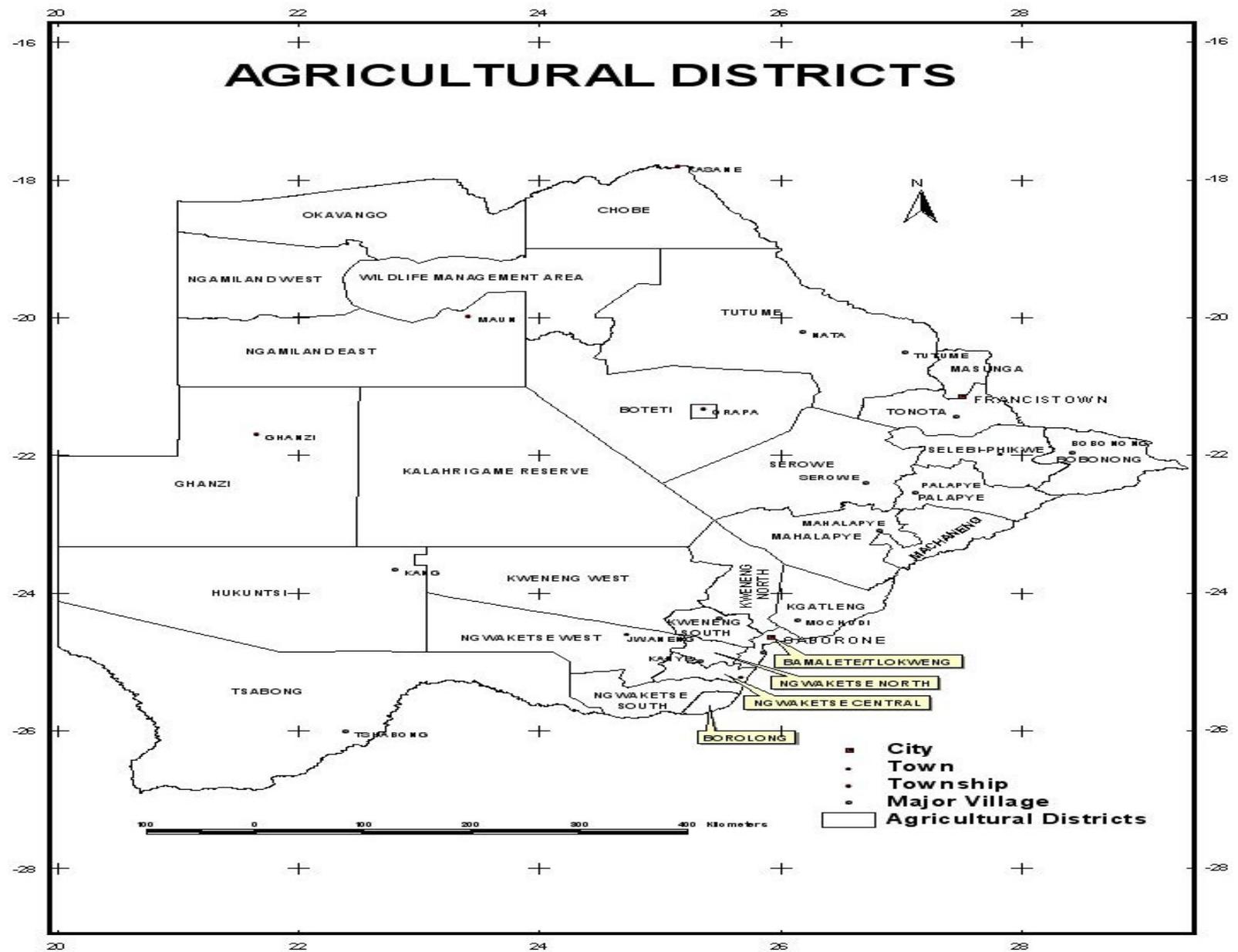


Figure 1. Map of Africa showing the districts in Botswana.

Table 2. Sources of information on job enrichment techniques.

Information sources	Yes	No
Internet	11(55)	9(45)
Management training	11(55)	9(45)
Colleagues	8(40)	12(60)
Advisory leaflets	15(75)	5(25)
Bulletin	12(60)	8(40)
Journals	15(75)	5(25)
Workshops	12(60)	8(40)
Seminars/Conferences	12(60)	8(40)

Table 3. Knowledge of job enrichment techniques.

Job enrichment techniques	True	False
Removal of control of a subordinate will improve job satisfaction	2(10)	18(90)
Assign a complete unit of work that can be done by subordinate without following job procedure will improve job satisfaction	7(35)	13(65)
Provision of feedback directly to employee by supervisor will boost their morale	12(60)	8(40)
Assignment of new or specialized task will improve job motivation	20(100)	0(0)
Rotating assignments among subordinates will improve self confidence on the work	19(95)	1(5)
Implementing participative management will create interesting work environment	19(95)	1(5)
Removal of difficult parts of assignment will reduce workers productivity	20(100)	0(0)
Increasing performance target will improve job motivation	20(100)	0(0)
Provision of additional authority to subordinate will reduce job performance	5(25)	15(75)
Assignment of highly specialized task to subordinate will not boost their morale	7(35)	13(65)
Reduction of control of a subordinate will improve job satisfaction	14(70)	6(30)
Encouraging increased use of skill variety will improve job satisfaction	19(95)	1(5)
Increasing the amount of recognition for doing a job well will reduce job performance	14(70)	6(30)
Involvement of subordinate in the identification and solution of problems that affect them and the organization will increase job dissatisfaction.	18(90)	2(10)
Provision of employees with the feeling that they are personally contributing to the organization will improve job performance	19(95)	1(5)
Combination of various work activities to provide a challenging work assignment will improve job performance	20(100)	0(0)
Increasing direct feedback to employees on matters that concern them will improve job motivation	19(95)	1(5)
Creation of autonomous work teams with responsibility and authority will reduce confidence	17(85)	3(15)

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 will 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 Table 4, out of the 16 listed job enrichment techniques, respondents 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%).

Table 4. Utilization of job enrichment techniques.

Techniques	Yes	No
Removal of control of a subordinate	6(30)	14(70)
Assign a complete unit of work that can be done by subordinate without following job procedure.	7(35)	13(65)
Provision of feedback directly to employee by supervisor	2(10)	18(90)
Assignment of new or specialized tasks	15(75)	5(25)
Rotating assignments or job schedules	9(45)	11(65)
Implementing participative management	12(12)	8(40)
Removal of difficult section of assignments	17(85)	3(15)
Adjusting performance target	7(35)	13(65)
Reduction of control of a subordinate	13(65)	7(35)
Provision of additional authority to subordinates	13(65)	7(35)
Increasing the degree of decision making of subordinates	8(40)	12(60)
Encouraging increased use of initiatives	13(65)	7(35)
Increasing the amount of recognition for a job well done	14(70)	6(30)
Involvement of subordinates in the identification and solution of problems that affect them and the organization	14(70)	6(30)
Provision of employees with the feelings of belongingness	16(80)	4(20)
Combination and /or rearrangement of tasks to be more challenging	16(80)	4(20)

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

Variables	Unstandardized coefficients		Standardized coefficients		
	B	Std. error	Beta	t	Sig0.
(Constant)	74.384	32.213		2.309	0.028
Information sources	0.658	0.236	0.397	2.790	0.009
Knowledge	-1.411	0.749	-0.293	-1.885	0.069
Marital status	3.981	5.036	0.118	0.791	0.435
Gender	6.130	4.523	0.200	1.356	0.185
Educational level	-1.469	0.709	-0.299	-2.07	0.005
Age	-0.309	0.108	-0.290	-2.86	0.006
Years of experience	0.661	0.228	0.477	2.896	0.007
Length on job position	0.387	0.814	0.078	0.476	0.638
Household size	0.597	1.398	0.076	0.427	0.672
On-going higher studies	-6.649	4.331	-0.266	-1.535	0.135
Residence's closeness to job location	1.381	4.029	0.052	0.343	0.734
F	2.333				
p	0.021				
R	0.739				
R Square	0.546				

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%).

The result of the multiple regression analysis of relationships between selected demographic characteristics and utilization of job enrichment techniques is presented in Table 5. 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. The demographic characteristics, knowledge and constraints were able to predict 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. It is important to ensure that DAOs are exposed to various information sources in order to improve their access to information on job enrichment techniques. Also, DAOs 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 DAOs 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.

Conclusions

The study has shown that DAO have low knowledge and low utilization of job enrichment techniques in Botswana. The knowledge test has highlighted areas of training needs for the DAOs. There is also the dominance of males in the extension delivery profession and DAO are married. The educational level of many the DAO 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, bulletin and workshops and conferences. Significant determinants are number of information sources used by DAOs, educational level, age and years of experience. The study therefore recommends that policy makers should ensure that DAOs are exposed to various information sources in order to improve their access to information on job enrichment techniques. Also, DAOs 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 DAOs 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.

REFERENCES

- Beder H (1990). "Reasons for Nonparticipation in Adult Education". *Adult Educ. Quarterly*, 40: 207-218.
- Buford JA (1990). "Extension Management in the Information Age". *J. Ext.*, 28(1): <http://www.joe.org/joe/1990spring/ent.html#fut2>. Accessed in May, 2008.
- Buford JA, Bedeian AG, Lindner JR (1995). "Management in Extension" (3rd ed). Columbus, Ohio. Ohio State University Extension.
- Chesney CE (1992). "Workforce 2000: Is Extension Agriculture ready?" *J. Ext.* 30: 2. <http://www.joe.org/joe/1992summer/fut2.html>. Accessed in May, 2008
- FAO (1990). Report on global Consultation on Agricultural Extension, Rome, Italy, (4-8): 217.
- Higgins JM (1994). "The Management Challenge" (2nd ed.) New York: Macmillan, pp. 141-160.
- James RM (2008). Work System Design to improve Economic Performance of the Firm. *Bus. Process Mgt. J.*, 14(3): 432-446.
- Kreitner R (1995). "Management" (6th ed). Boston: Houghton Mifflin Company, pp.120-135.
- MOA (2006). Ministry of Agriculture Botswana: Agricultural Support scheme Guidelines. Gaborone, p. 2.
- MOA (2007). National Master Plan for the Arable Agriculture and Dairy Development (NAMPAADD) Implementation Guidelines Ministry of Agriculture Botswana.
- Mrema GC (1996). Agricultural development and extension in Botswana: A review focusing on the future with an eye to the past. Proceedings of the First National Conference on Agricultural Extension CICE – Botswana College of Agriculture 24 -28 April 1995. pp. 110-125
- Smith GP (1994). "Motivation". *J. Ext.*, 28(1). <http://www.joe.org/joe/1990spring/ent.html#fut1>. Accessed in May, 2008.
- SUBAIR SK (2008). Perception of Agricultural Extension Officers regarding the policies established by Ministry of agriculture to strengthen agricultural extension services in Botswana. *Pakistan J. Soc. Sci.*, 5(1) 57-62.
- Watanabe S (1991). "The Japanese Quality Control Circle: Why it Works". *Int. Labour Rev.*, 130(1): 57-59.