Perception of Extension Workers on Effectiveness of Knowledge Management in Agricultural Extension Service Delivery in Sokoto State, Nigeria

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Abstract:
The study assessed the Perception of Extension Workers on Effectiveness of Knowledge Management (KM) in Agricultural Extension Service Delivery in Sokoto State Nigeria. Purposive sampling procedure was used, Extension Workers were selected from two Zonal Offices and Headquarters of Sokoto Agricultural Development Project (SADP). A sample size of 188 was drawn using well-structured questionnaires and was used for the study to generate information on Extension Workers and their perception. Descriptive statistics and perception index with 5-point Liker scale consisting of 7 statements were used as tools of data analysis. The result of the study indicated that perception (KPI=831) expound that knowledge management can effectively improve extension delivery in order to raise agricultural productivity, and ensure food security was the top most ranking. It was recommended; therefore that Knowledge Management should be given top management support in all government establishments.

Keywords —Knowledge, Management, Extension, Service, Workers, Delivery.

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1.   INTRODUCTION

This study seeks to underscore the Perception of Extension Workers on Effectiveness of Knowledge Management in Agricultural Extension Service Delivery with particular reference to Sokoto State. The composition among others in the extension delivering organisation includes Sokoto Agricultural Development Project (SADP). Sokoto State is located in the Sudan Savannah belt in the North Western part of Nigeria; it lies between latitude 12.9374° N andlongitude 5.2267° E. and shares common borders with Niger Republic in the North, Kebbi State to the South West and Zamfara State to the East. And it's occupied a total area of about 32,000 Square Kilometers landmark and ranked 5th out of the 36 States in the country with the population estimated to be 4,998,100 million people according to (National Population Commission, 2016). It has twenty three (23) Local Government Areas.

Knowledge Management (KM) is an approach that supports identifying, captioning, sharing, applying and creating knowledge as well as making knowledge accessible and usable for the intended audience. Knowledge Management comprises of a range of strategies and practices used in an organization to identify, create, represent, distribute, and enable adoption of insights and experiences. Such insights and experiences comprise knowledge, either embodied in individuals or embedded in organizational processes or practice, NIAEM (n.d). On the other hand, Agricultural Extension is an education that brings about improvement in a systematic way, through carefully planned and organized programmes to the rural people specially the farmers (Babasanya, 2013).

Therefore KM is expected to improve the effectiveness of agricultural extension services through the approach that support identifying, captioning, sharing, applying, creating knowledge as well as making knowledge accessible and useable for the intended audience in shortest time and with minimum energy.

Effective extension professionals can be assets of agricultural extension services in Nigeria, particularly in Sokoto State. Diverse and dynamic agricultural systems, advancing science and technologies, changing socio demographics, increasing globalization and growing competition for resources demand agricultural extension professionals to be proficient in the technical aspects of their areas of expertise, as well as in the processes and delivery of the services (Cochran *et al.,* 2012; Gibson and Brown, 2003; Maguire, 2012; Melak and Negatu, 2012; Rivera *et al.,* 2009; Swanson and Rajalahti, 2010 cited in Murari*et al.*, 2015). In other words, the need and demand for effective extension professionals to demonstrate a higher level of professionalism in their services are growing as the problem of Agriculture production in Nigeria particularly in innovations and advisory services that will solve the persistent problem between Farmers and Herdsmen. Maddy*et al.,* (2002) stated, "Extension employees should possess the necessary knowledge on KM to anticipate and deliver quality educational programmes of relevance and importance to our publics".

This study intends to look at KM in institutional perspective in agricultural extension approach in Sokoto State of Nigeria. This is because KM has not been given proper attention in Sokoto State as exemplified in other developing and developed countries of the world. In traditional communities, knowledge sharing fully relied on indigenous knowledge. This type of knowledge was generated by local communities and shared orally as exemplified by (Lwoga, 2010). To date, Africa and some Sub-Sahara Africa which Nigeria is inclusive depend on oral communication to improve their farming. Despite being useful, oral communication in extension service is known for message shortcoming and distortion, Mtega*et al* (2014). Extension Workers has not fully engaged in KM, when an individual perceives a thing or object,

it occurs with some processes. Perception takes place by sensation due to stimulation of sense organs which is the result of interpretation and analysis of sensation (Muhammad *et al*, 2013).. The present study was undertaken to determine the level of perception of extension workers on effectiveness of knowledge management on agricultural extension service delivery,

2. Methodology

2.1   Sampling Procedures:

Primary data was collected to answer the research questions as to achieve the desire objective of the study. The primary data include information on; socio-economic characteristics of the agricultural extension workers, the perception of agricultural extension workers on the role of KM in extension service delivery other relevant data having direct and indirect bearing on the study was gathered from sampling the Extension Workers using structured questionnaire and interview schedule.

2.2   Sampling Technique and sample size:

Purposive sampling was used to select ADP Extension Workers both from Head Office and two Zonal offices (Western and Northern Zones). The Extension Workers were also sampled through preliminary surveys using purposive sampling. The purposive sampling technique (non-probabilistic) was adopted in the process of recruiting the respondents under the study. This technique ensured only relevant respondents who are likely to provide quality, fruitful and meaningful data in the context of the study. ADP has a total number of 398 Extension Workers as show in Table 1, and 200 respondents which were also 50.1% of the population was sampled with equal percentage drowned from each department to form the sample frame as showed below.

Table 1: Sampling Technique and Size

Dept.	HQ	NZ	WZ	Total	Sp/Size (%)	No of Respdts
Admin	23	10	9	42	10.6	21
Extension	34n	112	128	274	68.8	138
Evaluation	7	12	15	34	8.5	17
Fadama	6	4	6	16	4.0	8
ICT	15	-	-	15	3.8	7
WIA	5	5	7	17	4.3	9
Total	89	143	165	398	100%	200

Source: Field Survey 2018

2.3   Analytical Techniques:
Descriptive statistics such as frequency distribution, percentage and perception index was used in data analysis.

2.4   Perception of Extension Workers: T

This measures the degree to which extension workers agree with the use of knowledge management in agricultural extension activities. The study adapted with slight modifications, the perception index used by (Muhammad *et al*. 2013), and perception was measure using Perception Index with 5-point Likert scale consisting of 7 statements on effectiveness of KM in Agricultural Extension approach. Responses on positive statements and negative statements were scored; Strongly Agree = 5, Agree = 4, Partially Agree = 3, Disagree = 2 and Strongly Disagree = 1. The respondents were on final score obtained from the total mean were grouped into high, medium, and low to determining the extent of perception.

3.   Data Presentation, Analysis and Discussion
3.1   Knowledge Management Perception Index (KMPI)
   The analysis of extension workers perception contain in Table 2 indicated that the respondents have the highest perception on effectiveness of KM agricultural extension service delivery in respect of 'KM can effectively improve extension delivery in order to raise agricultural productivity, evidence shows the highest (KMPI = 828). Closely followed again, 'KM can be used for field monitoring, events documentation, training to Farmers and conferences purposes during participatory learning'. In addition, KM can improve information sharing among research institutions, extension organizations and Farmers', which are the second highest with (KMPI= 800 and 800) respectively. The least perception shows in the Table was (KMPI = 749) in respect of 'KM can help extension agent increase the number of farmers coverage in short period'. The result also indicates that 'KM can be used to visualize agriculture environments, input availability (such as fertilizer, seeds etc) and market prices information for various crop' (KMPI = 766) was second to least.

   Generally, the result depicted that agricultural extension workers perception on effectiveness of Knowledge Management among agricultural extension workers was high in the area of study. The extension workers shows acquaintance with Knowledge Management, but there is need for support to be effectively used in extension services delivery. The study used seven statement of Knowledge Management Perception Indices (KMPI) between 749 and 828. The maximum possible of KMPI is 940; however, the result shows that, none of the statement has more than 830 KMPI. The study adapted with slight modifications, the perception index used by (Muhammad *et al*. 2013).

Table 2 Table 4: Rank Order of the Perception According to their Perception Index

Effectiveness of Knowledge Management	SA	A	PA	DA	SDA	EPI	RANK
KM can effectively improve extension delivery in order to raise agricultural productivity, even in smallholders' farms.	90	90	6	0	0	828	1
KM can be used for field monitoring, events documentation, training to Farmers and conferences purposes during participatory learning.	66	112	6	2	0	800	2
KM can improve information sharing among research Institutions, extension Organizations and Farmers.	78	92	14	0	0	800	2
KM can improve Organisational general performance of extension delivery in the State	69	97	18	2	0	791	4
KM can be used in information sharing through participatory approaches like Participatory Video shows , Participatory Communication (PC) within extension Organisation and among the farmers.	66	106	12	0	0	790	5
KM can be used to visualize agriculture environments, input availability (such as fertilizer, seeds etc) and market prices information for various crop	38	132	16	0	0	766	6
KM can help extension agent increase the number of farmers coverage in short period	59	93	26	2	0	749	7

AS=Strongly Agree, A=Agree, PA=partially Agree, D=Disagree, SDA=Strongly Disagree, EPI=Extension Perception Index

Source: Field Survey 2018

3.2 Extent of perception statuses of Extension Workers

Analysis of extent of perception statuses of the extension workers indicates that substantial number (94.2%) of the Extension Workers with highest proportion fell in category of high perception compare with 3.2% of extension Workers are in the medium category and least number (2. 1%) of the Extension Workers belong to low perception category (Table 5). With majority (97.4%) of the Extension Workers had medium to high perception toward the effectiveness of Knowledge Management in Agricultural Extension approach. This incentive to Knowledge Management and may have positive impact on effectiveness in Agricultural Extension approach due to knowledge and acquiesce of Knowledge Management.

Table 3: Distribution of Extension Workers according to Extent of Perception (n = 188)

Categories	Number	Percentage	Mean
Low (51 - 60)	4	2.1%	Medium (61 – 70)
7		3.7%	83.6
High (71 and above)	177	94.2%	**Total**
188		**100**	**Sources: Field Survey 2018**

4.   Conclusion

The important role of agricultural extension services in Sokoto State is highly imperative due to the nature of the people occupation. This study provides an insight on the use of knowledge management for effective agricultural extension delivery to the rural farming communities. However, the study has explored perception of extension workers on effectiveness of Knowledge Management in agricultural extension. Many studies or works has been carried out in other places to assess knowledge management and has proved effectiveness This is supported in Alcardo (2017) that ICT and agricultural knowledge can contribute to achieve the first Millennium Development Goal which deals with 'eradicating extreme hunger and poverty" by raising the income of small-scale farmers by strengthening the agriculture sector. Moreso, this study revealed that knowledge management helps to improves on the effectiveness of Agricultural Extension Service in the area study. The Extension Workers had become more prudence in Knowledge Management and Information capturing, storing and sharing to improving agricultural extension services. The results also indicated that the perception of the Extension Workers on 'KM can effectively improve extension delivery in order to raise agricultural productivity scored the highest (KMPI = 828) with standard deviation of 12.35. The result was detained due to the fact that majority of the Extension Workers were trained in Knowledge Management.

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