Scientific Innovation Research Journal (SIRJ), Maiden Edition.
100 - 108, Volume 1, Issue 1. October 2024
DOI: XXXXXXXXXXXXXXX

Extension Delivery Strategies Utilized Among Extension Practitioners in Southwestern Nigeria

***Ayotunde Olayinka Owolabi[1], Christiana Oluwatoyin Ajanaku[2], Matthew Durojaiye Ayeni[1], Ibukun Elzabeth Ojo[1]**

Department of Agricultural Economics and Extension,
Landmark University, Omu-Aran, Nigeria
owolabi.ayotunde@lmu.edu.ng, ayeni.matthew@lmu.edu.ng, ojo.ibukun@lmu.edu.ng

[2]Department of Physical Sciences,
Landmark University Omu-Aran Kwara State, Nigeria
ajanaku.christiana@lmu.edu.ng

Abstract- This study examined the various extension delivery strategies among extension practitioners in their extension work. The study was conducted in Oyo, Ondo Ogun and Ekiti States and comprised of 165 randomly sampled extension practitioners from public extension organization (PEO) and non-public extension organisations. (NPEO) include practitioners from Agricultural Development Programme (ADP) (124), while NPEO include practitioners from British American Tobacco (BAT) (10), Justice Development and Peace Commission (JDPC) (21) and United States Agency for International Development (USAID) (10), thereby giving a total of 41 respondents from NPEO. Structured questionnaire was used to elicit information from the respondents for each of the nine extension delivery strategies being carried out by the four extension organisations they were representing on a four-point scale. Descriptive statistics such as frequencies and means, were used in interpreting the data. Results revealed the weighted mean scores that extension practitioners from each organisation utilised most, five extension delivery strategies BAT utilized most were farmers field school (300), training and visit (300), lead farmers (300), farm trails (300) and field days (300). JDPC utilized training and visit most (295.2), while ADP (275.8) and USAID (260) utilized farmers' field school most in their extension work. This shows that generally across the four organisations farmer field schools is the most employed strategy. This establishes that most of the relevant strategies employed by extension practitioners in this study are participatory in nature with the target beneficiaries as active participants in acquiring the necessary skills, training and education.

Keywords: Extension delivery strategies, extension practitioners, public extension organisation and non-public extension organisations

1.0 INTRODUCTION

Most strategies employed by the extension practitioners from the various organisations centres around farmers' adoption, awareness of and access to practices, technologies and markets of new technologies in agriculture as well as gaining access to farm inputs and services. These strategies include Farmer Field Schools (FFS), Demonstration plots and Individual follow up (DPIF), Lead farmers and specialised training, credit schemes and saving initiative, value chain and market integration, on-farm trials, field days, group extension methodologies, on research station workshop, training and visit [1].

Farmers field school serves as a training technique that agricultural extension organisations use to involve farming communities or farmers on current farm technologies, agronomic practices coupled with interactive discussions of farmers personal needs, available resources, challenges as well as basis for adoption or non-adoption of the technology. This creates a participatory situation with a trained facilitator who has acquired well known and sharp skills from the extension personnel; this is usually represented by a farmers' representative. Demonstration plots are purposively included as part of a Farmers' Field School or is singularly in operation to prove the effect and advantage of embracing new farm inputs, innovation by farmers on an inter-personal basis. Farmers are allowed to be involved directly in the set-up and management of the

Scientific Innovation Research Journal (SIRJ), Maiden Edition.
100 - 108, Volume 1, Issue 1. October 2024
DOI: XXXXXXXXXXXXXXX

demonstration plots in order to equip them on the various trainings received in the Farmers Field School. Individual follow-up is basically carried out by extension practitioners or agriculture-based organisations by encouraging inter-visits among farmers as well as between farmers and buyers with the aim of showing essential agronomic practices, technologies and also up-grading dynamic relationships between farmers and buyers. The follow-up context has been integrated in order to have a clearer understanding (in-depth) of farmers' needs and problems.

The training and visit system is a concept that was a developed by a World Bank expert named Daniel Benor in 1974, for the purpose of actualising an effective agricultural extension service that is research- based and tailored to satisfy farmers' needs [2]. It primarily aims in rendering appropriate advice that would assist farmers in increasing their farm output and consequently their income through a touch of professionalism from the extension services rendered. The extension service is structured to operate a single line of command via the Department of Agriculture, with other subsidiary support from other agricultural organisations as well as local governments' organisation alongside with the administrative commitment of extension agents operating with their technical advice from each of the unit they are representing in their departments [3]. The training and visit system also exhibit concentration of effort by singularly focusing on extension work and ensuring consistent progress by regularly monitoring and evaluating the impact of its extension services to the target beneficiaries. It also manifests with time-bound activities such that the necessary knowledge and skills given to farmers should be consistent within the time frame of the fortnight visit to farmers by the extension workers. Other features the Training and Visit exhibit are field and farmer orientation, regular and continuous training, linkage with research by taking farmers feedback which are the problems encountered and unresolved back to research for immediate solution and viable outcomes.

Another strategy is lead farmers and specialised training. Lead farmers are mostly identified by agricultural extension organisations as farmers who are prompt in embracing farm innovations and ideas easily by extension personnel. They are known to be hyper-active and having a higher enthusiasm in any agricultural-related programme. They require little or no effort in convincing to adopting a new idea, as well as becoming a model to other farmers in the farming community. Most organisations make use of lead farmers so as to enhance local participation coupled with developing local leader capacity in order to increase their target beneficiary support. Some organisations usually create an extensive approach in developing lead farmers by locating the vacuum created in input supply on their farms, as well as weak relationships in the operation of their local markets. These lead farmers help in cushioning these loopholes existing between farmers and input suppliers.

Credit schemes and saving initiatives- this strategy encompasses linking of farmers to credit facilities, financial management skills which is required in all extension advisory services (EAS). Credit facilities are aimed at increasing farmers' access to farm inputs and services. These credit schemes are oftentimes inter-linked with low –interest paying rate financial institutions like micro-finance banks and other commercial banks and non- governmental organisations where farmers are assisted in securing loans in expanding their farming business. Agricultural extension-based organisations incorporate savings culture into the programmes being communicated to rural farmers so as to enhance their financial management capacity. A practical example can be seen from the catholic relief services (CRS), which encourages savings by linking people, viable existing farmers groups, farmers' associations to draw their resources together and lend money to other active members of the farmers group or associations.

Value chain and market integration and development- agricultural-based organisations mostly prefer integrating farmers into existing markets and value chains by encouraging consistent consolidation in the marketing of agricultural produce and value additions. This can be attained by ensuring input facilitation with

Scientific Innovation Research Journal (SIRJ), Maiden Edition.
100 - 108, Volume 1, Issue 1. October 2024
DOI: XXXXXXXXXXXXXXX

access to market, program sustainability and improving the farmers' behavioral change through value additions to the farmers produce. This assists Farmers Based Organisations (FBOs) to possess a more bargaining power in the process of buying and selling as it helps in eliminating uncertainties and risks in such transactions of their farm produce with consumers and hence reliable trust is ensured in the process. A study on factors influencing adoption of improved sweet potato technology revealed that inadequate storage facilities of sweet potato farmers must have risen from poor awareness of value chain additions of the farm produce [4]. Overall, literature reviewed showed that selection of any agricultural strategies by target beneficiaries is mostly necessitated from its level of accessibility, low costs and perceived benefits (Ayeni, Owolabi, Ayeni and Alhassan [5].

1.1 Statement of Problem

Rural development supports the improved well-being of rural people. Governments and international development organisations initiated the first wave of organized development. In recent times realization has grown that greater participation of development beneficiaries in decision making leads to better results. This experience has given rise to approaches that incorporate participatory planning in development efforts including decisive roles for the target groups of beneficiaries. Without doubt agricultural extension services have been critical components of rural development efforts It has contributed to the reduction of poverty and hunger, increased adoption of improved technologies and increased productivity and capacity of the beneficiaries [8]. To advance such development efforts and make them sustainable, extension service delivery efforts are targeted to develop local capacities of farmers, investment in basic infrastructures, facilities and to ensure local food security for rural populations. This poses a challenge for various agricultural extension organisations in unleashing the creativity of front-line extension in disseminating improved technologies and approaches in ways that benefit farmers and other agri-business operators. This has necessitated the deployment of extension strategies by public and non-public extension organisations for their personnel in order to educate farmers with research-based information. This will consequently enhance agricultural production, productivity, processing and marketing of agricultural goods and services in the country.

Some of the extension delivery strategies carried out by public organisations include farmers' field school, group methodologies and training and visit extension system. While some of the extension strategies carried out by non-public organisations include on research station workshop, lead farmers and specialized training, credit schemes and saving initiatives. However, there is need to ascertain the extent of extension delivery strategies employed by extension practitioners from public and non- public organistions in this study. Based on the foregoing, this study therefore aims to investigate the extension strategies of extension practitioners in southwestern Nigeria.

2.0 Theoretical Framework

Time, interaction, and performance (TIP*)* theory: this theory was originated by [6]. The theory describes work groups as time-based, multi-modal, and multi-functional social systems. Applying this theory to this study, shows that extension practitioner from various organisations uses these technologies to various degrees and reasonable extent in the course of discharging their extension obligation to their clienteles. In its concept, this theory emphasizes the uniqueness each extension organisation displays in carrying out their extension service delivery modalities. It helps in projecting how public and non-public organisations could have different outcomes in their extension service delivery based on how much time the personnel are involved with their clienteles on the field. Moreover, it equally reveals how often they engage each of the delivery strategy as well as how these personnel can effectively utilize at least more than two of these strategies in achieving an efficient and excellent extension service delivery within their organisations. It also advocate the various modes

Scientific Innovation Research Journal (SIRJ), Maiden Edition.
100 - 108, Volume 1, Issue 1. October 2024
DOI: XXXXXXXXXXXXXXX

of extension activities each organization are able to program for their clienteles [7]. For example, some of the extension delivery strategies carried out by public organisations include farmers' field school, group methodologies and training and visit extension system. While some of the extension strategies carried out by non-public organisations include on research station workshop, lead farmers and specialized training, credit schemes and saving initiatives. The timely and well programmed extension activities earmarked by each organisation tend to promote the varying degree of performances and extension outcome recorded by personnel of each organisation. It also reveals that actors from various organisations exhibit various extension functions and strategies that further translate their use of technologies distinctively from each other. This automatically enhances each extension organisation utilisation of technologies when qualitative period of time being engaged by their staff. However, actors from various organisations cannot operate at the same frequency as regards the use of technologies; due to their varying extension modalities, functions and the degree to which these technologies are considered to be important to their disseminating activities.

3.0 RESEARCH METHODOLOGY

The study was conducted in southwestern Nigeria which comprises of six states which are Oyo Ogun, Ondo, Ekiti, Osun and Lagos states. The area is between latitudes 6˚30'to 9˚0' North and longitudes 3˚0' East to 5˚30'East of the Greenwich meridian. The zone covers an area ranging from swamp forest to western uplands. In between are rain forests, mosaic savannah and deciduous forest. The climate in Southwestern Nigeria is characterized mainly as humid with rainfall pattern of 1500mm to 3000mm per annum. The rainfall pattern depicts a bimodal distribution with the peaks in June, early July and September, while November to February is characterised by harmattan brought about by the effect of the north eastern trade winds from the Sahara region. This supports the cultivation of arable crops (beans, rice, wheat, barley, nuts, cassava, melon, millet, maize, yam, soybeans, etc.) and tree crops (rubber, cocoa, cotton, groundnuts, cashew, oil palm, coffee, etc.). The high concentration of public and non-public organisations involved in agricultural extension services justifies the choice of this area of study. Figure 1shows the map of Nigeria indicating the selected states in the southwestern region used for the purpose of this study.

3.1 Sampling technique

The respondents were selected using a multi-stage sampling procedure. For public organisations, the first stage involved simple random sampling of four states (Oyo, Ondo, Ekiti and Ogun states) out of the six states that makes up the southwestern geopolitical zone of Nigeria. The second stage involved the random selection of the zones from the selected states by sampling 50% of the zones within each state. The third stage involved ascertaining the actual number of extension agents from the organisation by obtaining a list of all their extension agents in the agency. The fourth stage involved simple random sampling of 30% of the extension agents was drawn from each of the selected zones (i.e.124 respondents were drawn from ADP in the 4 states). While for non-public extension organisations, the first stage involved purposive selection of four states for respondents from British American Tobacco (BAT), Justice Development and Peace Commission (JDPC) and United States Agency for International Development (USAID) where they are mainly operational in the southwestern area while the second stage involved the purposive selection of the zones their extension outreaches were operationally based. The third stage involved ascertaining the actual number of extension agents in the organisations by obtaining a list of all their extension agents in the organisation and selection of all the extension agents in the organisation, BAT (10), JDPC (21) and USAID (10). (i.e. 41 respondents were drawn from these three extension organisations). Therefore, a grand total of 165 extension practitioners from public and non-public organisations were subsequently interviewed.

Scientific Innovation Research Journal (SIRJ), Maiden Edition.
100 - 108, Volume 1, Issue 1. October 2024
DOI: XXXXXXXXXXXXXXX

4.0 RESULTS AND DISCUSSION

Extension delivery strategies used by extension practitioners

Extension strategies used were classified organisation by organisation. Results from Table 1 shows that for British American Tobacco (BAT) organisation, FFS and DPIF had a weighted score of 300, with other four extension strategies which include ‘‘training and visit’’ (300) ‘‘lead farmers and specialised training’’ (300), ‘‘on farm trials’’ (300), ‘‘field days’’ (300) were mostly used. While ‘‘on-research station workshop’’ had a weighted score of 280 and was the least strategy used in this organisation. This suggests that extension practitioners from British American Tobacco (BAT) engage in multi-dimensional approach in the use of extension strategies for their extension service delivery. This has assisted them in rendering super-effective extension service to their clienteles. The least used strategy may have been as a result of non-compatibility of the agro-ecological workshop environment with that of the farmers’ farm or lack of suitable resources to activate such on farmers’ farm. [9] asserts that extension delivery strategies used mostly by extension personnel encompasses those strategies that mobilises farmers together as a group in order to enhance the rate of diffusion, adoption and sustainability of agricultural innovations disseminated to the farmers.

Results from Table 2 shows that for Justice Development and Peace Commission (JDPC) organisation, Training and Visit strategy was used most with a weighted score of 295.2. The least used strategy had a weighted score of 190.6 which is on research workshop. This suggests that this age-long strategy is still strongly adopted by extension practitioners from JDPC so as to ensure mutual and sustained relationships between the service providers and their clienteles. This tends to assist in rendering qualitative extension service delivery to the recipients. This finding supports the outcome of [10] which emphasised that farm visits were made on consistent basis in order to impact farmers by supervising them in taking sound decisions in relation to their various agricultural enterprises, as well as assist in tackling problems encountered by farmers on the field.

Results from Table 3 shows that for Agricultural Development Programme (ADP) organisation, FFS and DPIF was the most used extension strategy with a weighted mean score of 275.8; while the least used strategy was credit schemes and saving initiative (221.8). This suggests that extension practitioners from this organisation prefer to use the participatory group technique in actualising effective extension service by training local farmers through this strategy. The least used strategy may have risen as a result of non-eligibility of beneficiaries in meeting the financial standards or obligations of financial institutions in securing a loan from such. This finding confirms the work of [11], who found out that ‘farmer field school, demonstration plot and individual follow up were the most extension strategies used by extension personnel under the public extension agency in reaching out to their clients for excellent extension service delivery.

Also results from Table 3 shows that for United States Agency for International Development (USAID), the extension strategy used most is farmers’ FFS and DPIF with a weighted score of 260, while the extension strategy least used is value chain and market integration with a weighted score of (150). This suggests that extension practitioners from this organisation tend to use this strategy in order to deepen farmers understanding on various agronomic practices through participatory trainings. The least used strategy may have risen as a result of dearth of workers to integrate and facilitate farmers efficiently into market as well as input access. This finding is in line with [12] which accentuate the involvement of this international agency with extension personnel from Agricultural Development Programmes (ADPs) in employing strategies like demonstration plots, farmers’ field school with follow up schemes. These strategies have been put in place in some selected states in the country in order to equip their clienteles with relevant information and trainings on agricultural innovations

Scientific Innovation Research Journal (SIRJ), Maiden Edition.
100 - 108, Volume 1, Issue 1. October 2024
DOI: XXXXXXXXXXXXXXX

Result from Table 4 reveals the extension strategies used most across the four organisations by extension practitioners as FFS and DPIF with a weighted score of 275.8, while the extension strategies used least are both ‘‘on research station workshop’’ and ‘‘credit scheme and saving initiative’’ with weighted score of 234 each. This shows that generally across the four organisations used for purpose of this study, farmer field schools, demonstration plots and individual follow up is the most employed strategy. This establishes that most of the relevant strategies employed by extension practitioners in this study are participatory in nature.

The overall statistics of the respondents' extension delivery strategies used based on the four various organisations are BAT ($\bar{x}$ =252.18±90.92); JDPC ($\bar{x}$ =174.07±108.89); ADP ($\bar{x}$ =70.58±47.00); USAID ($\bar{x}$ =50.74± 23.39).

Table 1: Distribution of respondents by extension delivery strategies used in British American Tobacco (BAT) Organisation

Strategies	Always	Weighted score
Farmers Field School, demonstration plots &Individual follow up	100	300
Training and visit	100	300
Lead farmers &specialised training	100	300
On-farm trials	100	300
Field days	100	300
Value chain & market integration	90.0	290
Credit schemes &saving initiative	90.0	290
Group extension methodologies	90.0	290
On research station workshop	90.0	290

Source: Field work (2017)
*NB: Response options with no or negligible values have been excluded from the table.

Table 2: Distribution of respondents' by extension delivery strategies used in Justice Development and Peace Commission (JDPC) Organisation

Strategies	Always	Sometimes	Weighted Score
Training and visit	95.2	4.8	295.2
Credit schemes & saving initiative	90.5	9.5	290.5
Value chain & market integration	81.0	19.0	281
Lead farmers & specialised training	85.7	9.5	280.9
Farmers Field School, demonstration plots &individual follow up	71.4	28.6	271.4
On farm trials	71.4	28.6	271.4
Group extension methodologies	61.9	33.3	257.1
Field days	71.4	14.3	257.1
On-research station workshop	28.6	38.1	190.6

Source: Field work (2017)
*NB: Response options with no or negligible values have been excluded from the table

Scientific Innovation Research Journal (SIRJ), Maiden Edition.
100 - 108, Volume 1, Issue 1. October 2024
DOI: XXXXXXXXXXXXXXX

Table 3: Distribution of respondents' by extension delivery strategies used in Agricultural Development Programme (ADP) Organisation

Strategies	Always	Sometimes	Rarely	Never	Weighted score
Farmers Field School, demonstration plots &individual follow up	76.6	22.6	0.8	0	275.8
Training and visit	76.6	18.5	3.2	1.6	270
Group extension methodologies	74.2	21.8	2.4	1.6	268.6
On farm trials	70.2	21.8	5.6	2.4	259.8
Lead farmers & specialised training	62.1	33.9	2.4	1.6	256.5
Field days	63.7	27.4	6.5	2.4	252.4
On-research station workshop	48.4	45.2	5.6	0.8	241.2
Value chain & market integration	47.6	45.2	6.5	0.8	239.7
Credit schemes &saving initiative	35.5	52.4	10.5	1.6	221.8

Source: Field work (2017)

Table 4: Distribution of respondents by extension delivery strategies used in organisation – United State Agency for International Development (USAID) Organisation

Strategies	Always	Sometimes	Rarely	Never	Weighted score
Farmers Field School, demonstration plots &individual follow up	60.0	40.0	0	0	260
Training and visit	60.0	20.0	10.0	10.0	230
Credit schemes &saving initiative	40.0	40.0	10.0	10.0	210
On farm trials	50.0	20.0	20.0	10.0	210
Lead farmers &specialised training	40.0	40..0	10.0	10.0	210
Field days	40.0	30.0	20.0	10.0	200
On research station workshop	40.0	30.0	10.0	20.0	190
Group extension methodologies	30.0	20.0	20.0	20.0	160
Value chain & market integration	30.0	20.0	30.0	30.0	150

Source: Field work (2017)

Table 5: Distribution of respondents by extension delivery strategies used across the four organisations

Strategies	Always	Sometimes	Rarely	Never	Weighted score
Farmers Field School, demonstration plots & individual follow up	76.4	23.0	0.6	0	275.8
Training and visit	79.4	15.8	3.0	1.8	272.8
Group methodologies	70.9	22.4	4.2	2.4	261.7
Lead farmers & specialised training	66.1	29.1	3.0	1.8	259.5
On farm trials	70.9	21.2	5.5	2.4	260.6
Field days	65.5	24.2	7.9	2.4	252.8
Value chain and market integration	53.3	38.2	6.1	2.4	242.4
Credit schemes & saving initiative	46.1	43.6	8.5	1.8	234
On-research station workshop	47.9	40.6	9.1	2.4	234

Source: Field work (2017)

Scientific Innovation Research Journal (SIRJ), Maiden Edition.
100 - 108, Volume 1, Issue 1. October 2024
DOI: XXXXXXXXXXXXXXX

5.0 CONCLUSION

Extension delivery strategies commonly used across the various organisations were the farmers' field school, demonstration plots and individual follow up. This has proved to be a commonly adopted strategy as a result of its participatory nature with the target beneficiaries as active participants in acquiring the necessary skills, training and education from each of these extension related strategies. As a result, this makes those strategies prone to been more effective in assisting extension practitioners to developing a working relationship with the farmers that are meant to benefit from their extension dissemination activities [13]. However, it is noted that these delivery strategies like credit schemes and saving initiative as well as on-research station workshop were not largely employed by the extension practitioners probably due to bureaucratic process involved in securing loan from the government as well as non-adaptability of most on-research station workshop to most farmers' ecological environment. Respondents from British American Tobacco exhibited the highest extension delivery strategy followed by Justice Development and Peace Commission, Agricultural Development Programme and United State Agency for Development. This multidimensional approach used by British American Tobacco practitioners should be embraced by personnel of other extension organisations in order to render the most efficient extension service delivery to their target audience.

5.1 RECOMMENDATIONS

Public extension organisations should reduce to the barest minimum bureaucratic procedures required by farmers in securing loan from the government and also ensure adaptability of most on-research station workshops to suit farmers' ecological environment. This should be done so as to effectively engage those extension delivery strategies that have not been largely employed by extension practitioners (such as credit schemes and saving initiative as well as on-research station workshop) in order to promote efficient agricultural extension service delivery to target beneficiaries. Moreover, there should be an upgrade in consistent training and retraining of extension personnel from public organisations on how to educate farmers on using these extension strategies optimally in their production activities.

REFERENCES

[1] S. Sahlaney, K. Hoeberling, M. Bell and A. Bohn, ''Documenting Extension Approaches of Selected Development Organisations''. A Report paper from University of California, Davis and University of Illinois at Urbana-Champaign. USAID. MEAS. (2015)

[2] D. Benor and J.Q. Harrison, ''Agricultural Extension. The Training and Visit System'', UNN-87. World Bank, 1818 H Street, N.W. Washington D.C 20433, USA. (1977).

[3] F.O. Ogebe and D.O. Adanu, ''Impact of Training and Visit (T&V) Extension System on Outputs and Income of Cereals Farmers in Zangon Kataf Local Government Area of Kaduna State, Nigeria''. J*ournal of Research in Business and Management*. 6(6):42-49. (2018).

[4] E.A. Kolawole, A.O. Owolabi, A.O**.** Ajala and C. Onuh, ''Factors Influencing Adoption of Improved Sweet Potato Technologies in Kwara State''. *Moor Journal Agricultural Research*. Vol. 18: 151-161. (2017)

[5] M.D. Ayeni, A.O. **Owolabi,** O.T. Ayeni and Y.J. Alhassan , ''Climate Smart Agriculture Strategies among Crop Farmers in North Central Nigeria: Implication on Fram Productivity''. International Conference on Science Engineering and Business for Sustainable Development Goals(SEB-SDG) 1979-8-3503-2478-51231$31:00IEE DOI:10.1109/SEB-SDG5717.2023.10124616. (2023).

[6] J.E. McGrath, ''Time, interaction, and performance'' (tip): A theory of groups. *Small Group Research*. 22(2):147-174. (1991).

[7] A.O. Owolabi and O.T. Yekinni, ''Utilisation of information and communication technologies for agricultural extension service delivery in public and non-public organisations in southwestern Nigeria''. Open Access, 8(9), E10676. https://doi.org/10.1016/j.heliyon.2022.e10676. (2022).

[8] M. Suvedi and M. Kaplowitz, ''What Every Extension Worker Should Know''. Core Competency Handbook. Process Skills and Competency Tools. MEAS Handbook. (2016).

[9] Strategic Report extract from BAT, ''Annual Report, Delivering today, Investing in tomorrow'' (2015).

[10] JDPC, Annual Report, ''Justice Development and Peace Commission'' (Catholic Archdiocese of Ibadan, Nigeria. pp. 1 - 73. (2015).

[11] S.B. Azumah, S.A. Donkoh and J.A. Awuni, ''The Perceived effectiveness of agricultural technology transfer

Scientific Innovation Research Journal (SIRJ), Maiden Edition.
100 - 108, Volume 1, Issue 1. October 2024
DOI: XXXXXXXXXXXXXXX

methods: Evidence from rice framers in Northern Ghana''. *Cogent food and agriculturaL Journal*. 4(1):1-10 (1503798). (2018)
[12] USAID paper, ''Nigeria: In-depth Assessment of Extension and Advisory Services'' Developing Local Extension Capacity (DLEC) Project. (2017)
[13] K. Vignare, MEAS Discussion Paper Series 1. Options and Strategies for Information and Communication Technologies within Agricultural Extension. (2013)