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Original Research Article

Roles of Cyber Extension in Fish Farming Information Dissemination in Egbedore Local Government Area of Osun State

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Abstract: The dissemination of information on improved fish farming techniques through the use of cyber extension is ineffective due to the inability of the farmer to comprehend information passed across to them which is reflected on the continuous reduction in fish farming, hence the reason why it seems like there is no positive effect of the information disseminated to fish farmers on their productivity. The study was carried out to examine the role of cyber extension in fish farming information dissemination in Egbedore local government area of Osun state. Multistage sampling was used in selecting eighty (80) respondents for this study. Data was collected with the aid of questionnaire randomly drawn from the local government area. Descriptive analysis performed shows that 18.7% of the respondents were between 50-59 years of age with the mean age of 36 years and 55% of the respondents were male. Most (80%) of the respondents were married. Also, 48.7% were Christian while 50% of the respondents spent 13years above in school. Similarly, 68.8% of the respondents have household size of 5 members, fish farming experience less than 5 years (37.5%). Members of social organization (56.3%), annual income between #300,000 to #499,000 (51.3%) contact with extension agents (46.2%) Similarly, 21.3% obtain their capital from cooperative society while 81.3% of the respondents preferred both family and hired labor as source of labor. Further descriptive analysis shows all sampled respondents (100%) have access to smart phones that 72.5% of the respondent's always use smart phones, 27.5% of the respondents occasionally uses Smartphone in sourcing for fish farming information. Less than fifty percent (43.7%) have access to computer while 16.2% of the respondents uses computer always in sourcing for fish farming information and more than half of the respondents (68.8%) have access to laptop while 12.5% of the respondents use laptop always in sourcing for fish farming information and thirty-five percent of the respondents have access to tablet/ipad while 10% of the respondents use tablet/ipad always in sourcing for fish farming information. The types of fish farming information sourced via cyber extension includes pond construction, fish feed formulation, pest and disease control, poaching , quality fingerlings, marketing of fish and fish landing. A larger proportion of the respondents (85%) encountered some constraints in sourcing for fish farming information through the use of cyber extension, that 82.5% of the respondent indicated of erratic power supply as the constraint encountered in the study area while 81.3% of the respondents

indicated poor network and 73.8% of the respondents indicated high cost of data. Similarly, 65% of the respondents' encountered problem of poor service from the service providers while 75% of the respondents indicated technical know-how as the constraint encountered and 60% of the respondents encountered problem of financial capacity. Also, 50% of the constraints encountered by the respondents were very severe and 60% of the respondents indicated high severity of using cyber extension for fish farming information dissemination. The correlation analysis carried out shows that Age (r = 0.566), Household size (r = 0.598), Number of years spent schooling (r = 0.532), Pond size (r = 0.168), Annual income (r = 0.525) were significantly related to role of cyber extension in disseminating fish farming information. Also, Fish farming experience (r = -0.132) was significantly but negatively related to role of cyber extension in disseminating fish farming information. It was recommended that it is recommended that the respondents should consider the need to embrace or prioritize the services of private extension services.

Keywords: Roles, Cyber extension, Fish farming information.

INTRODUCTION

Information gap of the agribusiness system through cyber extension caused stronger synergy and fairness in the business relationships of upstream, downstream actors as well as the role of institutional support for agribusiness such as financial institutions and extension workers (Sumardjo, 2017). Cyber extension is regarded as the use of ICTs for agricultural and rural extension. There are three systems developed in cyber extension which are: (i) online consultation system - web consultation. (ii) Hand phone -based internet system. (iii) Android technology -based smart telephone. The utilization of agricultural and rural cyber extension is very useful for rural farmers to increase crop yields, as well as to consult researchers about agricultural issues. In some countries, it serves to escalate society's learning. By utilizing online networking, computer and digital interactive multimedia, not only researchers and farmers, but also by the whole society can benefit from it. Cyber extension is regarded as a strategic model since the model could improve information accessibility for farmers, field extension officers, extension managers, researchers, input agents and other related parties on extension practices. The role of cyber agricultural and rural extension is not only performed by developed countries but also by developing ones. Several African countries have quickly developed cyber extension for farming. The development of cyber extension could facilitate many parties on a real time basis. Databases are a fundamental prerequisite for the development of cyber extension. Thus, information could be accessed through email, short message and interactive discussion. Compared to conventional extension methods, many parties believe cyber extension has advantages, higher speed of data collection, identification of the most recent farming conditions, communication for information, meaning, the system could distribute information to huge number of users at the same time. Cyber means; relating to "Information Technology, the Internet, virtual reality and the Cyber Space" (Sharma, 2003). Cyber Space can be defined as the imaginary space behind the inter-connected telecommunications and computer networks, the virtual world. Software tools on networks provide facilities to interactively access the information from connected servers (Wijekoon, 2003). Cyber Extension thus can be defined as the "Extension over Cyber Space".

The dissemination of information has traditionally been less effective due to various reasons such as cost and time. With advances in information and communication technology provision of extension materials require more efficient media information on the use and delivery directly from an extension to farmers. Communication or extension efficient agricultural strategy is supported by a wide range of information technology services and innovative communication guaranteeing rural development and agriculture. Therefore, a cyber-technology offers tools that can be utilized for agricultural information dissemination effectively to all stakeholders in the development of agriculture (Wijekoon, 2011).

Sugiyanyo, (2013)posited that the process of communication is a process of delivering information both to himself and to others verbally, motion mimic, physical and written to change one's behavior both knowledge and skills to an innovation. Information technology has been maximally utilized to communicate information effectively into the development of work activities. This phenomenon is not limited only to urban areas but also to the influence of rural areas, where with the help of

communications technology, the entire government program launched to bring rural areas within the scope of advanced development (Bhavan, 2016). Based on the theoretical framework of Wilbur Schramm's study of communication for development, the role of media in agricultural development through the use of Cyber extensions in informing, instructing and enabling farmer participation has developed globally especially fish farmers (Bhavan, 2016).

Fish farming is a profitable venture and it is rapidly expanding and that is the more reason Nigerian government has made several attempts over the years to increase productivity of fish farmers through institutional reforms and various economic measures (Soyemi *et al,* 2015).Among the measures taken to promote fish farming is the use of cyber extension to get relevant information to farmers. The cyber extension therefore, become an important source of information dissemination because the way they present messages has an impact on public opinion as well as constituted authorities. The key role they play in structuring and dominating the public sphere make them the most used and preferred information sources (Olsena *et al,* 2016). Cyber extension not only provide information for fish farmers, but also allow new entrants who did not have access to training on fish farming to gather information with which they can start their own fish farm. Fish farming is fast gaining momentum among other rural livelihoods such as agriculture because of its untapped potential to generate employment and improve food security as it provides highly nutritious animal protein and important micronutrients among vulnerable households (FAO 2012). The general objective is to examine the role of cyber extension in Egbedore local government of Osun state, while the specific objectives are to; describe the socioeconomic characteristics of the respondents in the study area, identify the various fish farming information sourced through the use of cyber extension and identify the constraints militating against the use of cyber extension for fish farming information dissemination in the study area. The study hypothesis states that there is no significant relationship between respondents' socioeconomic characteristics and roles of cyber extension in disseminating fish farming information.

METHODOLOGY

Study Area

This study was carried out in Egbedore Local Government Area of Osun State, with its headquarter at Awo. The Local Government covers approximately 94sq/km. it share boundary with Irepodun Local government area in the North, Ede local government to South, Osogbo and Ejigbo local government to the West and East respectively. It has an estimated population size of about 74,435 (NPC, 2006), the local government is located on a thick tropical rainforest, Apart from Awo, which is the seat of the local government. Others towns and villages include Ara, Egbedi, Ojo, Igbokiti, Iloba, Aro, Abudo-Olope. Alasan, Iwoye, Ido-Osun, Ofatedo, Okinini Aaran, etc with the vast majority of the area's inhabitants being members of the Yoruba ethnic group. The Yoruba language is extensively spoken in the area while the Christian and Islam religions are widely practiced in the area.

The local government is located in the Southern rain forest; the climate is divided into two distinct season's namely rainy and dry season. Rainy season usually start in late March or early April and ends in late October while dry season starts around Mid-October or early November and continues until March the following year. The mean daily temperature ranges between 32^{o}-35°c. Agriculture is the major occupation of the people of the area while other income generating activities include pure water factory, welding industry, motor repairing and block making industry, trading, artisan also exist in the area.

Egbedore Local Government Area is mainly an Agarian area with a number of crops such as: Maize, Cassava, Cocoyam, Melon, Okra, Vegetables, Bananas, and Plantain cash crop produced include the following Cocoa, Kola nut, Timber and Palm produce. Egbedore Local Government Area is also home to several markets which include the Aje international market where a wide variety of commodities are bought and sold. The population of the study comprised all male and female fish farmers in Egbedore Local Government Area of Osun State. A multistage sampling technique was used in the selection of the respondents. The first stage involve the random selection of 5 wards from the wards in the area, the second stage involve a random selection of 2 villages each from the selected wards thus making a total of 10 villages and lastly, 8 respondents was randomly selected from each of the 10 villages thereby making a total of 80 respondents that constituted the sample size. Both primary and secondary data was used in the course of this study. The primary data was collected with the aids of a well-structured interview schedule that consist of both open and closed-ended questions. Data was analyzed using both descriptive statistics and inferential statistical analytical tools. The descriptive statistical tools used include frequency, count and percentage while the inferential statistical tools used in testing the stated hypothesis include Chi-square and Pearson's Product Moment Correlation.

RESULTS AND DISCUSSION

Appendix

Table 1: Distribution of Respondents by Socioeconomic Characteristics (N = 80)

Socioeconomic variables	Frequency	Percentage	Mean
Age			
<30	24	30	
30-39	27	33.8	36
40-49	10	12.5	
50-59	15	18.7	
60>	4	5	
Sex			
Male	44	55	
Female	36	45	
Marital status			
Single	2	2.5	
Married	64	80	
Separated	2	2.5	
Widowed	12	15	
Years spent schooling			
1-6	20	25	
7-12	18	22.5	
13>	40	50	15.5
No formal education	2	2.5	
Household size			
<5	55	68.8	4
5-6	21	26.2	
7>	4	5	
Fish farming experience			
<5	30	37.5	
5-9	27	33.8	6.8
10>	23	28.7	
Member of any social organization			
Yes	45	56.3	
No	35	43.7	
Pond size(Ha)			
<1	45	56.3	0.5
2-3	15	18.7	
4-5	12	15	
6>	8	10	
Annual income			
<300,000	14	17.5	
300000-499000	41	51.3	425,125
500,000>	25	31.2	
Contact with extension agents			
Yes	37	46.2	
No	43	53.8	
Duration of visits by extension agents			
Fortnightly	20	25	
Weekly	7	8.7	
Monthly	10	12.5	
Sources of capital			
Personal savings	7	8.7	
Cooperative	17	21.3	
Bank	9	11.2	
Others	6	7.5	
Sources of labor			
Personal labor	8	10	
Family labor	9	11.2	
Hired labor	18	22.5	
Both family and hired	33	41.3	

Source: Field survey 2021

Socioeconomic Characteristics of the Respondents Respondent's Age

Table 1 show that 30% of the respondents were less than 30 years of age while 33.8% of the respondents were between the ages of 30 to 39 years and 12.5% of the respondents were between the ages of 40 to 49 years. Also, 18.7% of the respondents were between 50 to 59 years of age, while 5% of the respondents were between the age of 60 years and above. The mean age of the respondents was 36 years. This indicates that youth who are active and energetic enough to perform fish farming activities were involved and are also in their productive ages respectively.

Respondent's Sex

Table 1 show that 55% were males while 45% were females. This indicates that both male and female engaged in fish farming but just 10% in the gender distribution, this may be as a result of the nature of the system or the energy involved.

Respondent's Marital Status

Table 1 show that 2% of the respondents were single, while majority (80%) of the respondents were married and 2.5% were separated. Similarly, 15% were widowed. The results implies that majority of the respondents were married. Married people are naturally seen as matured and minded people. Therefore, married as a status is expected to make them concentrate on their farming activities and also make family labor available to boost their production so as to earn reasonable income to support their families.

Respondent's Years Spent Schooling

Data presented on table 1 also show that 25% of the respondents spent between 1 to 6 years in school while 22.5% of the respondents spent between 7 to 12 years in school and 50% of the respondents spent 13 years and above schooling. Also, 2.5% of the respondents have no formal education. The mean of the year spent schooling was 15.5 years which indicates that most of the respondents are literate.

Respondent's Household Size

Table 1 show that 68.8% of the respondents were less than 5 people living in their houses while 26.2% of the respondents were between 5 to 6 people living in their houses and 5% of the respondents were above 7 people living in their houses. The mean of household size was 4 people.

Respondent's Fish Farming Experience

Table 1 show that 37.5% of the respondents have less than 5 years of experience in fish farming while 33.8% of the respondents have between 5 to 9 years of experience in fish farming and 28.7% of the respondents have 10 years and above of experience in fish farming. The mean year of fish farming experience was 6.8 years. This indicates that less than half of the respondents in the study area have been into fish farming business for a very long time, hence might know how to access relevant information relating into their enterprise with little or no assistance which may likely improve productivity of fish farmers. Therefore, experience is seen as an indicator of wealth, knowledge and practical skills.

Respondent's Membership of Social Organization

Similarly, table 1 show that 56.3% of the respondents belong to one or more social organization, while 43.7% of the respondents do not belong to any social organization. This implies that more than 50% of the respondents in the study area were members of different social organization which may be as a result of the benefits derived from been a member of such organizations.

Respondent's Pond Size

Table 1show that 56.3% of the respondents have less than 1ha while 18.7% of the respondents have between 1to 2 ha and 15% of the respondents have between 3 to 4 ha. Also, 10% of the respondents have 5 ha and above. The mean of the ponds size is 0.5ha. This indicates that many of the fish farmers in the study area are small scale.

Respondent's Annual Income

Table 1 show that 17.5% of the respondents earn less than 300,000 naira, while 51.3% of the respondents earn between 300,000 to 499,000 naira and 31.2% of the respondents earn 500,000 naira and above annually. The mean of income earned annually was 425,125 naira. This indicates that half of the respondents earns moderately annually.

Respondent's Contact with Extension Agents

The distribution of respondents by contact with extension agents revealed that 46.2% of the respondents have contact with the extension agents, while 53.8% of the respondents do not have contact with the extension agents. This indicates that half of the respondents in the study area do not have contact with the extension agents.

Duration of Visits by Extension Agents

Table 1show that 25% of the respondents were visited fortnightly while 8.7% of the respondents were visited on a weekly basis and 12.5% of the respondents were visited on a monthly basis. Also, 53.8% do not have contact with the extension agents. This indicates that fish farmers

were visited by the extension agents but the time of visit by the extension agents differs.

Sources of Capital

Data presented on table 1 also show that 8.7% of the respondents got their capital from their personal savings while 21.3% of the respondents obtained capital from cooperative society and 11.2% of the respondents obtained capital from bank. Also, 7.5% of the respondents obtained capital from other means, while 51.3% have no access to capital. This indicates that cooperative society is the major source of capital fish farmers do get their loans from.

Respondents Labor Source

Table 1show that 10% of the respondents' labor source was personal labor, while 11.2% of the respondents' labor source was family labor and 22.5% of the respondent's labor source was hired labor. Similarly, 41.3% of the respondents' labor source was both family and hired labor while 15% have access to labor. This indicates that the larger percentage of labor source was hired labor.

THE VARIOUS FISH FARMING INFORMATION SOURCED THROUGH THE USE OF CYBER EXTENSION

Table 2: Various Fish Farming Information Sourced through the Use of Cyber Extension

Awareness of Cyber Extension	**Frequency**	**Percentage**
Yes	68	85
No	12	
Information Sourced		
Pond construction	52	65
Fish feed formulation	60	75
Pest and disease control	58	72.5
Poaching	42	52.5
Quality fingerlings	61	76.3
Marketing	67	83.8
Fish landing	68	85
Access to Smartphone		
Yes	80	100
Duration of Information Sourced		
Always	58	72.5
Occasionally	22	27.5
Types of Fish Farming Information		
Pond construction	44	55
Fish feed formulation	56	70
Pest and disease control	60	75
Poaching	35	43.8
Quality fingerlings	80	100
Marketing	77	96.3
Fish landing	50	62.5
Level of Usage		
High	22	27.5
Moderate	48	60
Low	10	12.5
Access to Computer		
Yes	35	43.7
No	45	56.3
Duration of Information Sourced		
Always	13	16.2
Occasionally	22	27.5
No response	45	56.3
Information Sourced		
Pond construction	32	40
Fish feed formulation	28	35
Pest and disease control	34	42.5
Poaching	22	27.5
Quality fingerlings	35	43.8
Marketing	30	37.5
Fish landing	29	36.3
Level of Usage		
High	12	15
Moderate	10	12.5

Low	13	16.2
Access to Laptop		
Yes	55	68.8
No	25	31.2
Duration of Information Sourced		
Always	10	12.5
Occasionally	45	56.3
Information Sourced		
Pond construction	52	65
Fish feed formulation	43	53.8
Pest and disease control	38	47.5
Poaching	26	32.5
Quality fingerlings	55	68.8
Marketing	49	61.3
Fish landing	32	38.8
Level of usage		
High	5	6.2
Moderate	22	27.5
Low	28	35
Access to Laptop		
Yes	28	65
No	52	35
Duration of Information Sourced		
Always	8	10
Occasionally	20	25
Information Sourced		
Pond construction	15	18.8
Fish feed formulation	20	25
Pest and disease control	18	22.5
Poaching	10	12.5
Quality fingerlings	28	35
Marketing	23	28.8
Fish landing	19	23.8
Level of Usage		
High	3	3.8
Moderate	20	25
Low	5	6.2

Source: Field survey 2021

Respondent's Awareness of Cyber Extension

Table 2 show that 85% of the respondents were aware of cyber extension while 15% of the respondents were not aware. This indicates that larger percentage of the respondents is aware of cyber extension.

Respondent's Types of Information Sourced through Cyber Extension

Table 2 shows that 65% of the respondent's sourced information on pond construction while 75% of the respondents sourced information on fish feed formulation and 72.5% of the respondents sourced information on pest and disease control. Also, 52.5% of the respondents sourced information on poaching while 76.3% of the respondents sourced information on quality fingerlings and 83.8% of the respondents sourced information on marketing of fish. Similarly, 85% of the respondents sourced information on fish landing. This indicates that fish landing and marketing of fish are the main type of information sourced by the respondents due to their higher percentage.

Respondent's Access to Smartphone

Table 2 shows that 100% of the respondents have access to Smartphone. This indicates that all the respondents sampled have access to Smartphone.

Respondent's Duration of Obtaining Information Using Smartphone

Table 2 shows that 72.5% of the respondents use Smartphone always to source for fish farming information while 27.5% of the respondents occasionally source for fish farming information using Smartphone. This indicates that larger percentage of the respondents always source for fish farming information.

Respondent's Types of Fish Farming Information Sourced Using Smartphone

Table 2 shows that 55% of the respondents' sourced information on pond construction while 70% of the respondents sourced information on fish feed formulation and 75% of the respondents sourced information on pest and disease control. Furthermore, 43.8% of the respondents sourced information on poaching while 100% of the respondents sourced information on quality fingerlings and 96.3% of the respondents sourced information on marketing of fish. Also, 62.5% of the respondents sourced information on fish landing. The findings of the study indicates that all the fish farmers have various fish farming information available to them but quality fingerlings is the most information sourced by the respondents probably because they are best used for the commercial production of fish.

Respondent's Level of Usage of Smartphone

Table 2 shows that 27.5% of the respondents indicated that their level of Smartphone usage is high while 60% of the respondents indicated moderate level of using Smartphone and 12.5% of the respondents indicated low level of usage of Smartphone. This indicates that all the respondents use Smartphone to source for fish farming information.

Respondent's Access to Computer

Table 2 shows that 43.7% of the respondents have access to computer while 56.3% of the respondents do not have access to computer. This indicates that more than half of the respondents do not have access to computer.

Respondent's Duration of Obtaining Information Using Computer

Table 2 shows that 16.2% of the respondents uses computer always in sourcing for fish farming information while 27.5% of the respondents uses computer occasionally in sourcing for fish farming information and 56.3% of the respondents gave no response.

Respondent's Types of Fish Farming Information Sourced Using Computer

Table 2 shows that 40% of the respondents' sourced information on pond construction while 35% of the respondents sourced information on fish feed formulation and 42.5% of the respondents sourced information on pest and disease control. Also, 27.5% of the respondents sourced information on poaching while 43.5% of the respondents sourced information on quality fingerlings and 37.5% of the respondents sourced information on marketing of fish. Furthermore, 36.5% of the respondents sourced information on fish landing. This indicates that respondents sourced for different types of information on the computer which may be as a result of the technicality of the computer, economic and purchasing power as well as the availability of the computer.

Respondent's Level of Usage of Computer

Table 2 shows that 15% of the respondents indicated that their level of computer usage is high while 12.5% of the respondents indicated moderate level of using computer and 16.2% of the respondents indicated low level usage of computer. This indicates that majority of the respondents have at least moderate level of computer usage.

Respondent's Access to Laptop

Table 2 shows that 68.8% of the respondents have access to laptop while 31.2% of the respondents do not have access to laptop. This indicates that larger percentage of the respondents have access to laptop in sourcing for fish farming information.

Respondent's duration of obtaining information using laptop

Table 2 shows that 12.5% of the respondents use laptop always in sourcing for fish farming information while 56.3% of the respondents occasionally use laptop in sourcing for fish farming information and 31.2% gave no response. This indicates that larger percentage of the respondents sourced fish farming information occasionally using laptop.

Respondent's Types of Fish Farming Information Sourced Using Laptop

Table 2 shows that 65% of the respondents' sourced information on pond construction while 53.8% of the respondents' sourced information on fish feed formulation and 47.5% of the respondents' sourced information on pest and disease control. Similarly, 32.5% of the respondents source information on poaching while 68.8% of the respondents' sourced information on quality fingerlings and 61.3% of the respondents source information on marketing of fish. Also, 38.8% of the respondents source information on fish landing. This indicates that larger percentage of the respondents sourced for fish farming information, though at varying levels.

Respondent's Level of Usage of Laptop

Table 2 shows that 6.2% of the respondents indicated that their level of laptop usage is high while 27.5% of the respondents indicated moderate level of using laptop and 35% of the respondents indicated low level of usage of laptop. This indicates that few of the respondents use laptop in sourcing for fish farming information.

Respondent's Access to Tablet/Ipad

Table 2 shows that 35% of the respondents have access to tablet while 65% of the respondents do not have access to tablet. This indicates that larger percentage of the respondents do not have access to tablet or ipad which may be as a result of high cost of the tablet or how to operate the tablet.

Respondent's Duration of Obtaining Information Using Tablet/Ipad

Table 2 shows that 10% of the respondents use tablet/ipad always in sourcing for fish farming information while 25% of the respondents occasionally use tablet/ipad in sourcing for fish farming information and 65% gave no response. This indicates that higher percentage of the respondents do not use tablet/ipad to source for fish farming information.

Respondent's Types of Fish Farming Information Sourced Using Tablet/Ipad

Table 2 shows that 18.8% of the respondents' sourced information on pond construction while 25% of the respondents sourced information on fish feed formulation and 22.5% of the respondents sourced information on pest and disease control. Furthermore, 12.5% of the respondents sourced information on poaching while 35% of the respondents sourced information on quality fingerlings and 28.8% of the respondents sourced information on marketing of fish. Also, 23.8% of the respondents sourced information on fish landing. This indicates that respondent's source for fish farming information using tablet/ipad at varying levels.

Respondent's Level of Usage of Tablet/Ipad

Table 2 shows that 3.8% of the respondents indicated that their level of tablet/ipad usage is high while 25% of the respondents indicated moderate level of using tablet/ipad and 6.2% of the respondents indicated low level of usage of tablet/ipad. This indicates that few of the respondents use tablet/ipad in sourcing for fish farming information.

CONSTRAINTS MILITATING AGAINST THE USE OF CYBER EXTENSION

Table 3: Constraints Militating Against the Use of Cyber Extension for Fish Farming Information Dissemination

Constraints Encountered	Frequency	Percentage
Yes	68	85
No	12	
Types of constraints encountered		
Erratic power supply	66	82.5
Poor network	65	81.3
High cost of data	59	73.8
Poor service from the service providers	52	65
Technical know-how	60	75
Financial capacity	48	60
Severity of the constraints		
Very severe	40	50
Mildly severe	28	35
Level of constraints severity		
High	48	60
Moderate	20	25

Source: Field survey; 2021

Encountered Constraints

Table 3 shows that 85% of the respondents encountered some constraints in sourcing for fish farming information through the use of cyber extension while 15% of the respondents do not encounter any problem or constraints in sourcing for fish farming information. This shows that larger percentage of the respondents in the study area faces one constraint or the other in using cyber extension to source for fish farming information.

Types of Constraints Encountered

Table 3 shows that 82.5% of the respondent indicated of erratic power supply as the constraint encountered in the study area while 81.3% of the respondents indicated poor network and 73.8% of the respondents indicated high cost of data. Similarly, 65% of the respondent's encountered problem of poor service from the service providers while 75% of the respondents indicated technical know-how as the constraint encountered and 60% of the respondents encountered problem of financial capacity. This indicates that larger percentage of the

respondents encountered some constraints at varying levels.

Severity of the Constraints

Table 3 shows 50% of the constraints encountered by the respondents were very severe while 35% of the constraints were mildly severe and 15% of the respondents gave no response. This indicates that the constraints encountered by larger percentage of the respondents in using cyber extension in sourcing for fish farming information were very high.

Level of Severity of the Constraints

Level of severity as indicated on table 3 shows that 60% of the respondents indicated high severity of using cyber extension for fish farming information dissemination while 25% of the respondents indicated moderate severity of using cyber extension and 15% of the respondents gave no response.

HYPOTHESIS TESTING

Ho 1: There is No Significant Relationship between Respondents' Socioeconomic Characteristics and Role of Cyber Extension in Disseminating Fish Farming Information.

Relationship between Respondents' Socioeconomic Characteristics and Role of Cyber Extension in Fish Farming Information Dissemination.

Table 4: Summary of Correlation Analysis Showing the Relationship between Respondents' Socioeconomic Characteristic and Role of Cyber Extension in Disseminating Fish Farming Information

Socioeconomic Characteristics	Correlation coefficient	Decision
Age	*0.566	Significant
Household size	0.598	Significant
Number of years spent schooling	0.532	Significant
Fish farming experience	**-0.132	Significant
Pond size	0.168	Significant
Annual income	0.525	Significant

*= 5% level of significance
**= 1% level of significance

Table 4 shows that Age (r = 0.566), Household size (r = 0.598), Number of years spent schooling (r = 0.532), Pond size (r = 0.168), Annual income (r = 0.525) were significantly related to role of cyber extension in disseminating fish farming information. Hence, a change in one or all of these variables will result in a change in role of cyber extension in disseminating fish farming information. Also, Fish farming experience (r = -0.132) was significantly but negatively related to role of cyber extension in disseminating fish farming information.

RECOMMENDATIONS

Based on the result of the findings, the following recommendations were made.

The respondents should consider the need to embrace or prioritize the services of private extension services.

Government should provide credit facilities with minimum interest to the farmers in the study area to allow them to venture into large production of fish.

Extension agents should make their visits more frequent and regular to fish farmers and he/she must be adequately trained to handle farmer's problems.

REFERENCES

- Bhavan, V. Journal of Media and Social Development ISSN 2320-8244, 4(2).
- Olsen, M. S., & Osmundsen, T. C. (2017). Media framing of aquaculture. Marine Policy, 76, 19-27.
- Sharma, V. P. (2003, December). Cyber Extension: Information and Communication Technology Applications for Effective Agricultural Extension Services-Challenges, Opportunities, Issues and Strategies. In Enhancement of Extension Systems in Agriculture, Report of the APO Seminar on Enhancement of Extension Systems in Agriculture, held during (pp. 15-20).
- Soyemi, O. D., & Haliso, S. Y. (2015). Agricultural Information use as determinant of farm income of women in Benue State, Nigeria. Research on Humanities and Social Sciences 5 (18): 1-6.
- Sumardjo. (2017). Cyber extension: Peluang dan Tantangannya dalam revitalisasi Penyuluhan, Pertanian
- Wijekoon. (2003). Concept paper presented to Sri Lanka Council for Agricultural policy.