

Attitude of Fish Farmers towards Communication Media in Receiving Technological Information

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Abstract: - This paper seeks to find out the fish farmers attitude towards communication media in receiving technological information. Ten types of communication media (ICT, print and electronic media) and facilities were considered for the study. Data were obtained from a random sample of 120 farmers. The study was conducted in Kalihati upazila of Tangail district of Bangladesh during September to October, 2015. A pre-tested interview schedule was used for collection of data. Appropriate scales were developed and used in order to measure the concerned variables. Majority (65.83%) of the farmers were found to favorable attitude towards communication media. Rests of all (34.17%) were found to unfavorable attitude towards communication media in receiving technological information. Fish farmers' characteristics such as education, farm size, pond size, Organizational participation, Cosmopolitaness and use of mass media correlated positively with the attitude towards communication media while age, family size and annual family income had no significant relationship with attitude towards communication media. The findings of the present study could be useful for fisheries extension policy makers and fisheries extensionists.

accept new communication media because they were not fully aware in use of communication media.

Though there are so many ICT and mass media tools available in villages still many of the farmers are not making use of these tools for obtaining timely information due to physical, social and psychological barriers. Especially, attitude of the farmers plays a significant role in accepting and using these tools. Since these initiatives are new to their social system and establish rare contact with the external world (Palaiah *et al.*, 2016).

The success of any technology depends on its dissemination among the potential users which greatly depends on the information received by the farmers through different communication media. There are very scarce studies on fish farmer's attitude towards use of communication media on commercial fish culture. Hence, this study was undertaken to investigate the attitude of fish farmers towards communication media in receiving technological Information. The findings of the present study could be valuable guidelines for the researchers, planners, policy makers and other government and non-government organization for taking appropriate media to disseminate technological information among fish farmers.

I. INTRODUCTION

Aquaculture is the fastest growing food production sector in the world which plays a significant role in the economy in term of food, nutrition, income, employment and foreign exchange earnings (Chowdhury *et al.*, 2015). In Bangladesh aquaculture is speedily spreading in recent years. The fish production of Bangladesh in 2014-15 is 36.84 lac metric tons, where production from culture fisheries is 55.15%. Bangladesh ranks 5th in closed water fish production (DOF, 2016).

More people are coming into this business very rapidly. Marginal farmers are higher in number among the newcomers as they have seen that fish farming is more profitable than cultivating crops on land. But communication media is a major problem for the fish farmers. Commercially cultured farmers are now facing various problems. Among these problems, communication media is one of them (Sharmin, 2013). As it was found that more than 90% of the farmers felt low to medium use of communication media (Islam, 2009 and Akhter, 2011). More than half (53.90 percent) of the respondents had medium use of mobile phone (Barman, 2009) and majority (91.11 %) of the farmers fell in the rarely use of communication media in practicing rice cum fish culture (Hossain, 2010). This is insufficient for successful practice of fish culture. Basically, most of the fish farmers' were afraid to

II. METHODOLOGY

Location, population, and sample of the study: The study was conducted in Kalihati upazila of Tangail district. The area was selected because of availability of fish farmers in different unions as well as a number of communication media and facilities in the upazila. This upazila was purposively selected based on the above criteria and other management issues of the research. Out of eleven unions of the upazila, Birbasinda union was randomly selected as the specific study location. All fish farmers of the Birbasinda union were the population of the study. An up to date list of all fish farmers of the union was prepared by the help of UFO (Upazila Fisheries Officer) and assistants of the UFO office. Records were checked for this purpose and it was found that there were 367 fish farmers in the union in June 2015. These 367 fish farmers constituted the population of the study. From this population, 33% or one-third of the fish farmers, i.e. 120 fish farmers were selected as the sample for the study. Random sampling method was used to identify the farmers to be included for the study. A reserve list of 37 fish farmers (10% of the population) was also prepared for using in case of any possible omission or absence

during data collection. Data were collected using a pretested structured questionnaire during September to October, 2015.

Variables and their measurement: Fish farmer’s attitude towards communication media was the major focus of the study. An attitude may be defined as ones predisposition to act towards an object in a certain manner. Attitude of a respondent towards mass media was used to refer his or her feeling, belief, and action tendency towards the various programmes of communication media and facilities available.

Likert scale was used to determine the attitude towards communication media (Hosen & Rahman, 2013). The scale contained 10 statements of which 9 positive and 1 negative statements. These positive and negative statements were arranged randomly. A statement was considered if it is unfavourable towards the mass media. The respondents were asked to express opinions in the form of “Strongly agree”, “Moderately agree”, “No opinion” “Disagree” and “Strongly disagree”. A score of 5, 4, 3, 2, and 1 was given to “Strongly agree” “Moderately agree” No opinion “Disagree” “Strongly disagree” if the statements was positive. On the other hand, for a negative statement reverse scoring method was followed. Hence attitude towards mass media was determined by summing up the score by him for all the statements in the scale.

Table 1: Statements for understanding attitude of fish farmer’s towards communication media

Sl. No.	Statements	Extent of agreement				
		SA	MA	NO	D	SD
1.	Knowledge is increased significantly by listening radio.					
2.	Technological information from farm magazine can be used easily.					
3.	Reading leaflet is wastage of time, because it is not much helpful.					
4.	We can learn about useful technological information as a result of watching television programs.					
5.	Posters are good for getting first hand information about technology.					
6.	We can easily receive agricultural information by using cell phones.					
7.	Agricultural and technological information can be obtained successfully by using internet.					
8.	Call centers provide urgent technological information.					

9.	Technological information are available in Union Digital Centre (UDC).				
10	Agricultural Information and Communication Center (AICC) is useful in receiving technological information.				

SA= Strongly agree, MA= Moderately agree, NO = No opinion, D=Disagree and SD=Strongly disagree.

On the other hand, nine characteristics of the fish farmers were selected for the investigation namely age, education, family size, farm size, pond size, annual income, organizational participation, cosmopolitaness and use of mass media. Rated scoring method was used for measuring independent variables. Statistical tests like frequency distribution, percentage, mean, standard deviation and correlation etc. were employed to interpret data.

III. RESULTS AND DISCUSSION

Selected characteristics of the farmers: Nine socio-economic characteristics of the fish farmers were selected as the independent variables of the study. These were: age, education, family size, farm size, pond size, annual income, organizational participation, cosmopolitaness and use of mass media. In addition, salient features of the characteristics and basic statistical value of respondents have been presented in Table 2.

Table 2: Descriptive statistics and salient features of the respondent fish farmers

Variables	Scoring unit	Range value		Mean	Standard Deviation
		Possible	observed		
Age	Years	Unknown	26-75	48.47	10.44
Education	Years of schooling	Unknown	0-17	8.10	4.48
Family size	Number of members	Unknown	3-16	8.81	2.98
Farm size	Hectares	Unknown	0.253-9.190	1.45	1.12
Pond size	Decimal	Unknown	10-500	57.86	54.63
Annual income	‘000’ Tk.	Unknown	147.36-1658	604.98	286.17
Organizational participation	Scale score	Unknown	0-62	12.52	10.54
Cosmopolitaness	Scale score	0-18	7-15	10.79	1.87
Use of mass media	Scale score	0-18	3-12	6.63	2.36

Attitude of fish farmers: Attitude of fish farmers towards communication media in receiving technological information varied from 15 to 46 against the possible range of 10 to 50. The mean and standard deviation were 32.51 and 9.55, respectively. On the basis of attitude scores the respondents were categorized into three categories as shown in Table 3.

Table 3: Distribution of the fish farmers according to attitude towards communication media

Category	Respondents (n=120)		Mean	Standard deviation
	Number	%		
Unfavourable (up to 29)	41	34.17	32.51	9.55
Neutral (30)	0	0		
Favourable (>30)	79	65.83		

Data presented in Table 3 revealed that satisfactory majority (65.83 per cent) of the fish farmers possessed a favorable attitude towards communication media and also 34.17 per cent of them possessed an unfavorable attitude. No respondents were found having neutral attitude towards communication media. It means that, positive attitude are forming among fish farmers towards using communication media in receiving agricultural information.

For understanding fish farmers attitude towards communication media statements were asked to fish farmers on radio, television, poster, leaflet, farm magazine, cell phone, internet, call centre, Union Digital Centre (UDC) and Agricultural Information and Communication Centre (AICC). For many of the fish farmers mobile phones are getting the only convenient mode of communication in the study area. Some fish farmers are using internet through smart phone. Different TV channels are telecasting fish farming programmes and advertisement on fish feed and hatchery. Fish farmers were found interested to TV programme on fish farming. But farmers had very poor interest on radio programme. Different fisheries feed companies are provide technological information of fish farming through leaflet, poster and farm magazine. Some educated fish farmers were found interested to receive technological information through leaflet, poster and farm magazine.

The Access to Information (A2i) project supported Union Digital Centers (UDC) in each Union Parishad premise, is also a huge step towards digitization of community services for rural people. An important initiative by the Ministry of Agriculture is the establishment of Agricultural Information and Communication Centers (AICC) throughout the country. Access of fish farmers to UDC and AICC are increasing day by day.

The situation regarding attitude towards communication media score of the fish farmers in all individual statements has been presented in Table 4.

Table 4: Attitude of fish farmers towards communication media

Sl. No	Statements	Mean	Standard deviation
1	We can learn about useful technological information as a result of watching television programs.	3.93	1.69
2	We can easily receive agricultural information by using cell phones.	3.87	1.73
3	Agricultural Information and Communication Center (AICC) is	3.69	1.13

	useful in receiving technological information.		
4	Agricultural and technological information can be obtained successfully by using internet.	3.40	1.23
5	Technological information are available in Union Digital Centre (UDC).	3.33	1.50
6	Reading leaflet is wastage of time, because it is not much helpful.	2.76	1.31
7	Technological information from farm magazine can be used easily.	2.75	1.12
8	Posters are good for getting first hand information about technology.	2.55	0.97
9	Knowledge is increased significantly by listening radio.	2.48	0.95
10	Call centers provide urgent technological information.	2.30	1.12

Table 4 showed that fish farmers have more favorable attitude towards ICT based communication media such as television, cell phone, internet, AICC and UDC comparatively with print media such as poster, leaflet and farm magazine. Call center was not familiar with the fish farmers of the study area since this service is very early adopted ICT initiative for technological information dissemination among the farmers. Now a day's fm radio is getting popular among rural people as well as farmers rather than old band width radio.

Relationship of selected characteristics of the fish farmers and their attitude towards communication media: A total of 9 selected characteristics of the fish farmers considered for understanding relationships between those characteristics and fish farmers attitude towards communication media. To test the relationship, Pearson's correlation coefficients were computed as the results have been presented in Table 5.

Table 5: Relationship of selected characteristics of the fish farmers and their attitude towards communication media.

Selected fish farmers characteristics	Correlation coefficient (r)
Age	-.019 ^{NS}
Education	.220**
Family size	.265 ^{NS}
Farm size	.281**
Pond size	.182*
Annual income	.015 ^{NS}
Organizational participation	.047**
Cosmopolitaness	.034*
Use of mass media	.265**

*significant at the 0.05 level of probability, ** significant at the 0.01 level of probability, NS= Non significant

Out of 9 independent variables education, farm size, pond size, Organizational participation, Cosmopolitaness and use of mass media correlated positively with the attitude towards communication media. On the other hand age, family size and annual family income had no significant relationship with attitude towards communication media.

Comparatively educated farmers those have organizational participation shows interest to know different new technological information. They always search new source of information rather than traditional sources. Farmers those have large farm size and pond size needs more timely information for their large scale operation. Only dependence on manual information sources is not enough for them. So, they find appropriate technological information through communication media. Use of communication media removes farmers' apathy and fear towards this type of information sources. Use of communication media is very important to forming favorable attitude.

IV. CONCLUSION & RECOMMENDATIONS

Given the working hours, the logistical constrains, the geographical context and the available resources, it's a mammoth task for each extension agent to provide adequate support to all the assigned farmers. Efficient use of communication media can reduce this gap. Understanding fish farmers' attitude towards communication media is very crucial to develop the existing extension channel. Present study found satisfactory number of farmers have favorable attitude towards communication media but a portion of farmers have unfavorable attitude towards communication media. On the other hand farmers are showing interest on ICT based media rather than traditional print media. So, to use this farmer's favorable attitude steps should be taken to easy access of farmers into ICT based communication media. There have a great opportunity to encourage and trained farmers towards using communication media in receiving technological information. Timely and sufficient supply of poster, leaflet and farm media should be ensured. Policy makers should give concern on radio and television

agricultural programme to increase timely and fruitful telecasting.

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