



Attitude of Tribal Farmers of Meghalaya towards ICT-Based Extension Services

A. Kharmudai* . D. Sumi . Jyothi S.S.P

College of Post Graduate Studies, (CAU), Umiam-793103, Meghalaya

ARTICLE INFO

Article history:

Received 4 February 2017

Revision Received 19 August 2017

Accepted 19 October 2017

Key words:

ICT, attitude, agriculture, tribal farmers.

ABSTRACT

ICT is an important pillar that strengthens the extension activities in the current scenario and will bring new information services to rural farmers which will commence greater control than ever over current information channels. Access to such new information sources is a crucial requirement for the sustainable development of the farming systems. ICT when applied to the rural and agricultural conditions can improve the linkages between research sub-system and farmer sub-system. In this backdrop a study was conducted to observe if the Khasi tribal farmers have a favourable attitude towards the ICT - based extension services. Sixty respondents were randomly interviewed for the study. All of the farmers owned mobile phones and television or radio. The study revealed that majority of the farmers (81.67%) have a moderate favourable attitude towards the ICT-Based extension services whereas, 18.33 % of the respondents have a more favourable attitude. This means that there is a scope for higher usage of ICTs in disseminating the agriculture related information and the tribal farmers need to be aware of the advantages of using the information and communication technologies.

1. Introduction

Almost all human activities at present are being guided and supported with the help of Information and communication technology. ICT tools are becoming one of the basic necessities of daily life. ICT enabled extension in agriculture is of great help to communicate a message in a more effective and comprehended manner. By studying the attitude towards the ICT- based extension services of the farmers who are the end users of the availing ICT tools and ICT projects we can know the extent up to what range of the existing ICT-infrastructures have been a boon to the rural population especially the farming sector. Such study and the resulting findings need to be documented in order to draw lessons for the future. Arora and Rathore (2013) confirm that the attitude of the users was better than that of non-users towards *e-choupal* and it

can change the attitude of the non-users towards the programme while ICTs can enhance their knowledge and skills in the field of agriculture with little effort. Dhaka and Chayal (2010) focussed their study on the attitude of farmers towards ICT as a source of information and concluded that effective utilization of ICT has potential to make the rural communities prosperous as it enables the dissemination of requisite information in user friendly form, easy to access, cost-effective ways at the right time. Shankaraiah and Swamy (2012) show that in Doddaballapura 32.5% of the farmers had most favourable attitude while 40% of farmers had favourable attitude followed by 27.5% who had least favourable attitude towards MMS network. Hence the focus of this study was to find if the tribal farmers have a more favourable attitude towards the extension service through ICTs or vice-versa.

*Corresponding author: achinkharmudai@gmail.com

2. Materials and Methods

2.1 Location of study

The study was conducted in the North-eastern state (Meghalaya) which has 11 districts out of which the East Khasi Hills District was purposively selected for the study due to presence of maximum number of households possessing ICTs in this district as per the census report of the Government of India (2011). The Community and Rural Development Block of Khatarshnong-Laitkroh located at 18 Km towards south from District Headquarters Shillong has been selected randomly for the study. Two villages viz. Diengkynthong and Mawjrong were selected randomly.

2.2 Selection of Farmers

30 respondents from each selected village were randomly interviewed. Thus a total of 60 farmer respondents were finally selected for data collection for the study.

2.3 Measurement of Variables

Attitude was selected as the dependent variable and age, sex, education, occupation, land holding, annual income and social participation were selected as the independent variables. Attitude was measured by using the scale

developed by Kumar and Ratnakar in 2011 with required modification. Mean, standard deviation and correlation coefficient were worked out using SPSS.

3. Results and Discussion

3.1 Profile and Socio-Economic Status of the respondents

The data in Table 1 reveals that 63.33% respondents were between 34 and 58 years old, 20% belonging to the age group above 58 years and 16.67% were below 34 years. The table also reveals that more than half (70%) of the farmers were female and 30% of them were male. Significant percentage of farmers (50%) have studied only below the 5th standard, 20% have their education between 5th and 10th standard, 9% have studied higher secondary and above and 9% of them are illiterate. Majority of the farmers (83.33%) were engaged in both farming and animal husbandry. All the respondents have a land holding of below one hectare. Majority (71.67%) of the farmers had annual income between ₹8,878 and ₹65,455 while 15% of them get below ₹8,878 and 12.90% get above ₹65,455. Three fourth (76.67%) of the respondents had no membership with any organisation indicating that there is no social participation and about 20% of the farmers were member of at least one organisation.

Table 1. Distribution of farmers according to Personal Characteristics n=60

SI No.	Characteristics	Range	Farmers	Mean	SD
1.	Age	Below 34 years	10 (16.67)	45.82	11.87
		Between 34 and 58 years	38 (63.33)		
		Above 58 years	12 (20.00)		
2.	Sex	Male	18 (30.00)		
		Female	42 (70.00)		
3.	Educational Qualification	Illiterate	9 (15.00)		
		Below 5 th standard	30 (50.00)		
		Between 5 th and 10 th standard	12 (20.00)		
		Higher Secondary and Above	9 (15.00)		
4	Occupation	Farming only	7 (11.67)		
		Farming and Animal Husbandry	50 (83.33)		
		Farming and Service	1 (1.33)		
		Farming, Animal Husbandry along with Service	2 (3.33)		
5	Land Holding	Below 1hectare	60 (100.00)		
6	Annual Income	Below ₹8,878	9 (15.00)	52,167.00	13288.41
		Between ₹8,878 and ₹65,455	43 (71.67)		
		Above ₹65,455	8 (12.90)		
7	Social Participation	No Membership	46 (76.67)		
		Membership in one organisation	12 (20.00)		
		Membership in more than one organisation	2 (3.33)		

Figures in parenthesis indicate percentage

Attitude of the respondents towards ICT-based extension services

Table 2. Distribution of farmers according to their Attitude.

n=60

Statements	Agree	Undecided	Disagree
1 ICTs provide possible solutions to the present agricultural situation.	52(86.67)	5(8.33)	3(5.00)
2* ICTs cannot meet location specific needs of the farmers.	31(51.67)	13(21.67)	16(26.67)
3 ICTs are potential tools to reach the needy farmers.	11(18.33)	22(36.67)	27(45.00)
4 Farmers feedback is fast through ICTs than traditional methods	5(8.33)	8(13.33)	47(78.33)
5* Illiteracy will not deter farmers in availing ICT services.	37(61.67)	17(28.33)	6(10.00)
6* ICTs cannot deliver personalized information.	30(50.00)	22(36.66)	8(13.33)
7 ICT based extension services assist the farmer in planning and decision making aspects in agriculture.	35(58.33)	16(26.66)	9(15.00)
8* 'ICT services' is a distant dream for resource poor farmers.	14(23.33)	29(48.33)	17(28.33)
9 Farmers can get remunerative prices to their produce through ICT based market intelligence.	60(100.00)	0	0
10 Expert advice makes the farmers enterprise/activities productive.	60(100.00)	0	0
11* All kinds of information exchange are possible only through ICTs.	1(1.67)	2(3.33)	57(95.00)
12 Existing infrastructure of ICTs is not enough to meet the needs of the farming community.	59(98.33)	0	1(1.67)
13* Only resourceful farmers can get the benefit of the ICTs	28(46.67)	10(16.67)	22(36.67)
14 Access to information centre at village level is boon to the farming community.	52(86.67)	8(13.33)	0
15 Phone-in-live with scientists gives first hand information about queries.	42(70.00)	16(26.67)	2(3.33)
16* ICTs alone would solve the problems of farmers.	1(1.67)	1(1.67)	58(96.67)
17 ICT based Pest/disease outbreak warning system facilitate farmers to take preventive measures	27(45.00)	24(40.00)	9(15.00)
18* ICT extension services avoid the personal extension contact.	34(56.67)	13(21.67)	13(21.67)
19 ICTs based extension services provide new opportunity to build a skilled and knowledge community.	24(40.00)	28(46.67)	8(13.33)
20* ICT is a valuable tool, but it will never influence farmers' own decision making.	49(81.67)	5(8.33)	6(10.00)
21 Weather forecasting through ICTs assists farmers in timely decisions.	27(45.00)	33(55.00)	0
22* ICT based extension services are alternative to the present extension system.	2(3.33)	9(15.00)	49(81.67)

Figures in parenthesis indicate percentage

The data in table 2 reveals that 86.67 % of the farmers agreed that ICTs provide possible solutions to the present agricultural situation while 51.67% of the farmers agreed that ICTs cannot meet location specific needs of the farmers. 45% of the farmers disagreed and 18.33% of them agreed that ICTs are potential tools to reach the needy farmers. More than three fourth (78.33%) of the farmers disagreed that their feedback is fast through ICTs than the traditional methods. 61.67% of the farmers agreed that Illiteracy will not deter them in availing ICT services and 10% disagreed with this statement. Half of the farmers respondents agreed (50%) that ICTs cannot deliver personalized information. 58.33% ICT based extension services assist the farmer in planning and decision making aspects in agriculture. Almost half of

the respondents (48.33%) neither agree nor disagree with ICT services as a distant dream for resource poor farmers while remaining (23.33%) agreed and (28.88%) disagreed. All the farmers agreed that they can get remunerative prices to their produce through ICT based market intelligence and that the expert advice made their farm activities productive. A majority of the farmers (95%) disagreed that all kinds of information exchange were possible only through ICTs and (98.33%) agreed that the existing infrastructure of ICTs were not enough to meet the needs of the farming community. 46.67 per cent of the farmers agreed that only the resourceful farmers can get the benefit of the ICTs while (36.67%) disagreed. Majority (86.67%) of the respondents agreed that access to information centre at village level is a boon to the

farming community and (70%) agreed that Phone-in-live with scientists had given them the first hand information about their queries. Almost all the farmers (96.67%) disagreed that ICTs alone would solve their problems. 45% of the farmers agreed that ICT based pest/ disease outbreak warning system facilitate them to take preventive measures. 56.67% of the farmers agreed that ICT extension services avoid the personal extension contact and among the others, half (21.67%) disagreed and half (21.67%) remain undecided. 40% of the famers agreed that ICTs based extension services provide new opportunity to build a skilled and knowledge community. A majority (81.67%) of the farmers agreed that ICT is a valuable tool, but it will never influence their decision making. 45% agreed that weather forecasting through ICTs assists farmers in timely decisions. 81.67% of the farmers disagreed that ICT based extension services were alternative to the present extension.

Attitude score of each Respondent

Table 3. Distribution of the farmers according to attitude score. n=60

Attitude Categories	Number	Percentage	Mean Attitude Score
Less Favourable	0	0	0
Medium Favourable	49	(81.67)	49.55
More Favourable	11	(18.33)	58.63

Figures in parenthesis indicate percentage

The data in Table 3 reveals that 18.33% of the respondents had a more favourable attitude while a majority of them (81.67%) had a moderate favourable attitude towards the ICT-Based extension services. Similar findings

Relationship of the Dependent variable with the Independent variables

Table 4. Correlation of attitude with the independent variables

Sl. No.	Personal and Socio-Economic Characteristics	Correlation r
1	Age	-0.524**
2	Education	0.394**
3	Occupation	0.397**
4	Annual Income	0.344**
5	Social Participation	0.327*

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

were also reported by Chauhan (2010) in his study where the farmers had a positive attitude towards the use of ICT (Internet). The data in table 4 above reveals that age was strongly and negatively correlated with the attitude of the farmers towards the ICT -based extension services and this correlation was significant at 0.01 (2-tailed). The table also shows that education, occupation and annual income were moderately and positively correlated with the attitude at 0.01 level of significance (2-tailed) and social participation was moderately and positively correlated with the attitude at 0.05 level significance (2-tailed). These findings were similar with the findings of Falola and Adewumi (2011) who reported that farm income, education and membership of association were positively correlated whereas the age of household head is negatively correlated with the mobile usage of the farmers for agricultural production activities and Parmar et al. (2015) where education, annual income and social participation were found to be significantly correlated with the attitude of the respondents towards the use of Kisan Call Center.

Conclusion

The study revealed that majority of the Khasi tribal farmers possessed medium favourable attitude and more favourable attitude towards ICTs based Extension services which implied that there is a scope of more usage of ICTs in disseminating the agriculture related information among the tribal farmers and they need to be aware of the advantages of using the information and communication technologies. Since majority of the farmers had moderate to more favourable attitude towards the ICT-Based extension services, effective utilization of ICT has a potential to make the rural communities prosperous as it enables the dissemination of requisite information in user friendly form, easy to access and cost-effective ways at the right time with the proper assistance of the Extension personnel.

References

- Arora S, Rathore S (2013). Attitude of Farmers towards ITC's *e-Choupal*: Comparison between Users and Non-Users. *J Global Comm* 6(1): 64-68
- Chauhan NM (2010). Farmers' perception about ICT application: A case study of Gujarat state. *Ind Res J Extension Edu*, 10(3): 21-26
- Dhaka BL, Chayal K (2010). Farmers' Experience with ICTs on transfer of technology in changing agri-rural environment. *Ind Res J Extension Edu* 10(3): 114-118

- Falola A, Adewumi MO (2011). Constraints to use of mobile telephony for agricultural production in Ondo State, Nigeria. *J Res Forestry Wildlife Environ* 4(2): 52-63
- GoI (2011). Census Info India. Houses, Household Amenities and Assets. Government of India
- Kumar PG, Ratnakar R (2011). A scale to measure farmers' attitude towards ICT-based extension services. *Ind Res J Extension Edu* 11(1): 109-112
- Parmar VS, Sharma OP, Bhuva RM, Patel AI (2015). Relationship between personal and socio-economic characteristics of farmers and their attitude towards the use of Kisan Call Center. *Trends in Biosciences* 8(3): 693-694
- Shankariah N, Swamy BKN (2012). Attitude of farmers and scientists towards dissemination of technologies through Mobile Message Service (MMS). *Trop Agril Res* 24(1): 31 - 41