

Original Research Article

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Availability, Accessibility and Attitude towards ICT - A Study in Meghalaya

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ABSTRACT

Present study was undertaken on availability and accessibility of different ICTs hardware. A total of 200 samples were taken for the present study, i.e., 100 male respondents and 100 female respondents. The respondents were selected from three villages through random sampling method. The results revealed that 84 per cent of the male respondents have mobile phones of their own whereas, 81 per cent of the female respondents have mobile phones of their own. It clearly revealed that 69 percent of the male respondents have favorable attitudes towards ICT whereas 72 percent of the female respondents have favorable attitude towards ICT. So, majority of the respondents had favorable attitude towards ICT and hence, they need to be encouraged a little more by the ICT expertise by providing them a short duration training or awareness programme on the use and importance of ICTs. This will help them to learn the valuable use of ICTs in different ways in agriculture and allied activities. It can be said that female respondents have attained a more favorable attitude towards ICT rather than male respondents. It was found that the correlation of male respondents between age and the attitude towards ICT is negligible because the attitude towards ICT does not depend on age. Similarly, the correlation of female respondents between age and the attitude towards ICT is negligible because the attitude towards ICT does not depend on age. So, their effect towards ICT is negligible. It was found that the attitude of male respondents and female respondents towards ICT does not depend on age because the perceived effects towards ICT are independent of age. The finding shows that by providing training or awareness programmes on different aspects of ICT hardware will be more useful and benefitted to their day to day life.

Keywords

ICTs, Availability of ICTs, Access to ICTs, Attitude towards ICTs

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Introduction

Information and Communication Technology (ICT) is used as an overarching term incorporating all modes of transmission like electronic devices, networks, mobiles, services and applications which help to disseminate information with the help of technology. In the recent years, ICT has

proved to be extremely beneficial for farmers including small land holders, marginalized and poor farmers, and helped them in marketing, precision farming and improved profits. It plays a crucial role in disseminating information to farmers enabling them to decide on the cropping pattern, use of high-yielding seeds, fertilizer application, pest management, marketing, etc. Traditionally,

Indian farmers have been following indigenous production methods and rely upon friends, relatives, fellow farmers and input dealers to get information regarding agriculture. With advancement of agricultural science and technology, multiple options to access modern technologies have become available. It is evident from the replacement of indigenous varieties of seeds by high-yielding varieties and traditional equipment and practices by power tillers, tractors and others machines. Through ICT, farmers have been empowered to exchange their opinions, experiences and ideas. It has given farmers more exposure and allowed them to use science that looks at agriculture from an integrated perspective. Also, e-Agriculture is one of the action lines identified in the declaration and plan of action of the World Summit on the Information Society. E-agriculture has the potential to put India on the higher pedestal of 'Second Green Revolution' by making Indian agricultural sector self-sufficient.

According to FAO (2011), exchanging information is critical for the stakeholders in agriculture value chain in order to reduce the asymmetries in information and communication as well as to reduce the vicious circle of poverty. Further, the role of ICTs in accessing more information in order to enhance food security and support rural livelihoods has also been increasingly recognized and officially endorsed at the World Summit on the Information Society (WSIS) 2003-2005 (IICD, 2007). The role of ICTs as an instrument for progress and development has been widely acknowledged in this 'Global Information age', and it has been observed that people with all walks of life are being impacted by the IT sector directly or indirectly. Among other ICTs, mobile telephony has emerged as the technology of choice of the majority of the urban and even the rural masses (Ansari and

Pandey, 2013). The possession of mobile phones particularly has become a necessity in the contemporary society irrespective of age, status, profession, income groups or place of residence. As such, mobile phones have been regarded as the widely accessed tool among the farmers for communication and also accessing agriculture-related information particularly for the marketing of produce (Chhachar *et al.*, 2014). In this context, mobile technologies can offer the means for development in developing countries (Rashid and Elder, 2009).

ICT or Information and Communications Technology in simple terms, can be defined as the basket of technologies, which assist or support in storage, processing of Data/Information, or in dissemination/communication of Data/Information, or both. ICT thus includes technologies such as desktop and laptop computers, software, peripherals and connection to the Internet that are intended to fulfill information processing and communication functions.

People of Meghalaya are predominantly dependent on agriculture. More than 70% of the state's total population is engaged in agriculture and allied activities, which also contributes around 22% of the state's Gross Domestic Product. Though majority of the State's population are non-vegetarian, yet the state does not produce enough meat to meet the local demand. Substantial quantity of meat and eggs are imported into the state from other states like Assam, Andhra Pradesh, West Bengal and Maharashtra. Milk production in the state is among the lowest in the country. The per capita availability of milk in the state is nearly one-third of the national average. The level of industrialization in the state is relatively low; as such opportunities for employment outside the primary sector are currently limited. It is evident that agriculture and allied activities

have a much greater bearing on both the state's economy as well as lives of people in the state. The state is yet to be self sufficient in the production of food grains due to topographical, agro-climatic factors, widespread jhum cultivation, and low technology adoption, etc. the study was undertaken with the following objectives that include to study the background profile of the respondents. To find out the availability and accessibility to ICT of the respondents. And also to explore the acquired attitude towards ICT.

Materials and Methods

The study was carried out under AICRP Home Science Project. The study was undertaken in the three villages of West Garo Hills, Meghalaya. The selected villages were Aminda Simsang, Aminda Kongkrang and Aminda Rangsgre of Gambegre Block was selected randomly. The data was collected from 100 farm men and women of selected villages. The interview scheduled was prepared to know the availability and accessibility to ICT of selected both farm men and women. The data was collected during 2018 – 2019.

Results and Discussion

Age

From table 6, it is clearly indicates that large percentage (40%) of the male respondents belonged to young age (18-35yrs.) and the least percentage (20%) of the male respondents belonged to upper middle age (51 years and above). Whereas 59 percent of the female respondents belonged to young age (18-35 yrs) and the least percentage (10%) of the female respondents belonged to upper middle age (51 years and above). The finding shows that young middle age group of both male and female respondents were more in

number than middle and upper middle age group.

Caste

From table 6, it indicates that the entire respondents of both gender (male and female) were belonged to Scheduled tribe because the state of Meghalaya was dominated by tribal people Meghalaya was dominated by tribal people.

Education

From table 6, it is clearly indicates that large percentage (43%) of the male respondents have their education up to middle school followed by 21 percent are studied up to primary school and only 4 per cent of the respondents have education up to graduation level. Whereas, large percentage (39%) of the female respondents have their education up to class X followed by 22 percent are able to read and write and only 1 per cent each of the respondents have education up to graduation and post graduation.

The finding shows that respondents studied up to middle school and class X were more in number compared to other educational qualification. From table 6 it is also revealed that more female respondents were illiterate in comparison to their male counter parts whereas more farm women can read and write than their counter parts.

Marital status

From table 6 indicates that large percentage (84%) of the male respondents were married followed by 16 per cent of the respondents belonged to unmarried. Whereas 83 per cent of the female respondents were married followed by 15 per cent of the respondents were unmarried and 1 per cent each of the respondents were widow and divorcee. The

finding shows that married couple were more in number than other marital status.

Occupation

From table 6, it is observed that 83 per cent of the male respondents belonged to daily wage earner followed by 10 per cent of the respondents were engaged in government service. Whereas 47 per cent of the female respondents belonged to daily wage earner followed by 36 per cent of the respondents belonged to farming and 17 per cent of the respondents were engaged in government service. The finding shows that main occupation of the both male and female respondents were predominant from daily wage earner. Surprisingly there are no female respondents having occupation as business which shows the lack of entrepreneurship development exists among the female respondents.

Type of family

From table 6 revealed that entire respondents (both male and female) were belonged to nuclear family and it is an obvious picture to see that in the present scenario nuclear family system is prevailing in all parts of the country including North East states of Meghalaya.

Size of family

From table 6 it is clearly indicates that large percentage (63%) of the male respondents belonged to small family followed by 31 per cent belonged to medium family and 3 per cent belong to large family. Whereas, large percentage (79%) of the female respondents belonged to small family (0-4 members) followed by 19 per cent belonged to medium family (4-8 members) and 2 per cent belong to large family (above 8 members). It was found that both male and female respondents belonged to nuclear families so their family

sizes are small and medium.

From Table 1, it is clearly indicates that 41 per cent of the male respondents have television at their own followed by 23 per cent in newspaper 20 per cent in magazines, 10 percent each in others (Journals, leaflets, booklets etc.) and radio whereas 90 per cent each of the respondents does not have radio and others (Journals, leaflets, booklets etc.) at their own followed by 80 per cent in magazines, 77 per cent in newspaper and 59 per cent in television.

As far the female respondents 34 per cent have television at their own followed by 11 per cent each in newspaper and magazines, 8 percent in others (Journals, leaflets, booklets etc.) and only 3 per cent in radio whereas 97 per cent of the respondents does not have radio at their own followed by 92 per cent in others (Journals, leaflets, booklets etc.), 89 per cent each in newspaper and magazines and 66 per cent in television. The finding shows that frequency of use of television for both gender were more in number than other mass media.

Availability and accessibility to ICTS

From Table 2, it is clearly indicates that 84 per cent of the male respondents were answer all the calls, receive all the SMS, read all the messages as well as can write the messages too but only 22 respondents use memory stick in their mobile.

Most probably they receive the written SMS from their relatives and some other sources. Whereas, 81 per cent of the female respondents were answer all the calls, receive all the SMS, read all the messages as well as can write the messages too but only 23 respondents use memory stick in their mobile. Most probably they receive the written SMS from their relatives and some other sources.

Table.1 Distribution of respondents according to their Mass media ownership and frequency of use

Mass media	Male						Female					
	Owned %	Other Source (use owned by others) %	Frequency of use				Owned %	Other Source (use owned by others) %	Frequency of use			
			Always	Sometimes	Rarely	Never			Always	Sometimes	Rarely	Never
Radio	10	90	10	50	40	-	3	97	3	50	47	-
Television	41	59	41	42	17	-	34	66	34	50	16	-
News paper	23	77	5	5	32	58	11	89	-	-	30	70
Magazines	20	80	2	4	35	59	11	89	-	-	28	72
Others (Journals, leaflets, booklets etc.)	10	90	-	2	22	76	8	92	-	-	22	78

Table.2 Distribution of respondents according to frequency of use of different ICT tools

ICT tools	Male				Female			
	Frequency of usage				Frequency of usage			
	Always	Sometimes	Rarely	Never	Always	Sometimes	Rarely	Never
Television	41	42	17	-	34	50	16	-
Radio	10	50	40	-	3	50	47	-
Mobile	84	-	-	16	81	-	-	19
Kiosk / common service centers	-	-	-	100	-	-	-	100
Computer	2	-	-	98	-	-	-	100
CD/VDV	2	-	-	98	-	-	-	100
Internet	2	-	-	98	2	-	-	98
e- mail	-	-	2	98	-	-	-	100

Table.3 Distribution of respondents according to their problems associated with use of ICTs

Statements	Male				Female			
	Yes		No		Yes		No	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
ICT Services are unaffordable	76	76	24	24	83	83	17	17
Poor network connectivity	86	86	14	14	96	96	4	4
Lack of awareness about ICTs	95	95	5	5	100	100	-	-
Erratic power supply	96	96	4	4	100	100	-	-
Lack of knowledge on operating ICTs	96	96	4	4	100	100	-	-
Lack of training on use of ICTs	-	-	100	100	100	100	-	-
Lack of repairing centres in the area	-	-	100	100	100	100	-	-
High cost for repairing ICTs	98	98	2	2	100	100	-	-
Technical illiteracy (Computer)	97	97	3	3	100	100	-	-
Language problem	96	96	4	4	100	100	-	-
Cultural taboos	-	-	100	100	-	-	100	100
ICT services(Kiosks/Internet Cafe) are faraway	-	-	100	100	100	100	-	-
High cost of net packs	83	83	17	17	87	87	13	13
Any other	-	-	100	100	-	-	-	-

Table.4 Overall attitude of respondents towards ICT

Category	Score range	Male				Female				
		Frequency	Percentage	Mean	SD	Score range	Frequency	Percentage	Mean	SD
Highly favorable	18 – 30.58	20	20	45.81	0.75	40.5-43	8	8%	42	0.534
favorable	30.59 – 42.23	69	69	37.37	3.28	31.1-40.5	72	72%	37.15	2.704
Least favorable	42.24 - 47	11	11	27.9	2.71	19-31.1	20	20%	28.45	2.781

Table.5 Percent distribution of respondents according to their attitude towards ICTs

Statements	Male						Female					
	SA	A	UD	D	SD	Mean score	SA	A	UD	D	SD	Mean score
I feel updated whenever using ICTs to find any information	12	17	34	34	3	3.01	3	18	37	38	4	2.78
Use of ICTs is a wastage of time	12	20	31	18	19	2.88	10	31	33	22	4	3.21
ICTs helps the farmers in decision making	-	13	41	42	4	2.63	-	2	46	47	5	2.45
Use of ICTs makes life more complicated	1	21	39	18	21	2.62	-	27	44	22	7	2.91
ICTs improves the farmers output	-	11	54	31	4	2.72	-	1	65	30	4	2.63
ICTs helps farmers to acquire needed knowledge	-	12	53	34	1	2.76	-	1	63	34	2	2.63
Sever as a link between government and farmers	-	12	53	34	1	2.76	-	1	65	33	1	2.66
ICTs motivate farmers to adopt new technology	-	12	50	36	2	2.72	-	1	62	35	2	2.62
ICTs demonstrate improved technologies to farmers	-	11	49	38	2	2.69	-	1	62	35	2	2.62
Use of ICTs creates isolation from the other population	-	8	51	39	2	2.65	-		61	37	2	2.59
I feel proud to be able to access the internet at any time	1	7	89	3	-	3.06	-	1	92	5	1	2.95
ICTs connect people with latest trends of technology	2	13	63	20	1	2.93	-	1	77	20	2	2.77
Any other	-			98	2	2.98	-	1	98	2	-	2.98

Table.6 Correlation between personal and socio-economic variables of the respondents with attitude towards ICT

Variables	Male	Female
	Correlation coefficient	Correlation coefficient
Age	0.092	0.032
Caste	-	-
Education	0.102	-0.177
Occupation	0.161	-0.229
Family Income	-0.046	-0.028
Family type	-	-
Organisational membership	0.048	-0.020
Organizational participation	-0.020	-0.066
Extension contact	0.323	-0.221
Mass media exposure	0.177	-0.101
Ownership of mobile phones	-0.124	-0.282

Fig

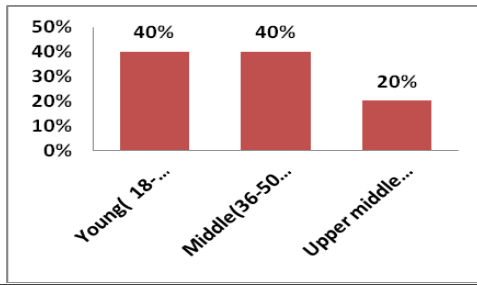


Fig. 1.1(a): Distribution of male respondents according to their age

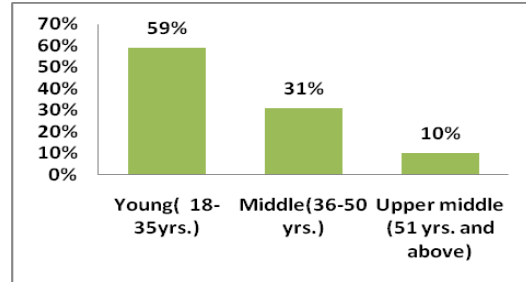


Fig. 1.1(b): Distribution of female respondents according to their age

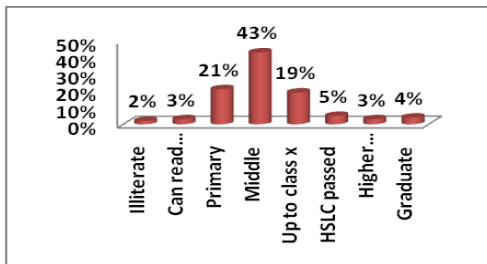


Fig. 1.3(a): Distribution of male respondents according to their educational qualification

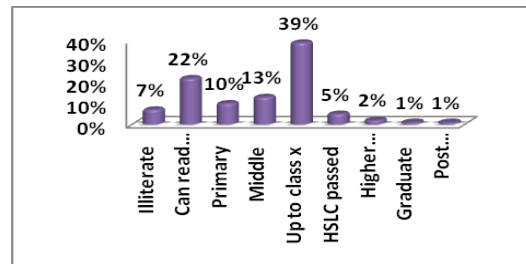


Fig. 1.3(b): Distribution of female respondents according to their educational qualification

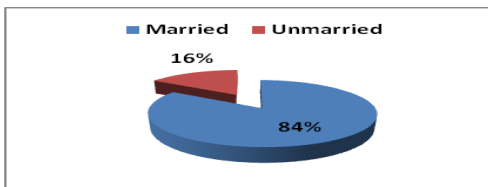


Fig. 1.4(a): Distribution of male respondents according to their marital status

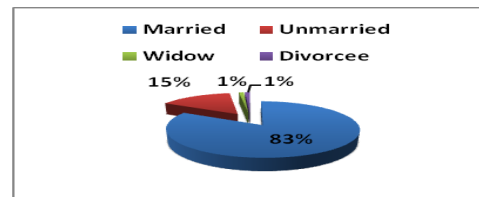


Fig. 1.4(b): Distribution of female respondents according to their marital status

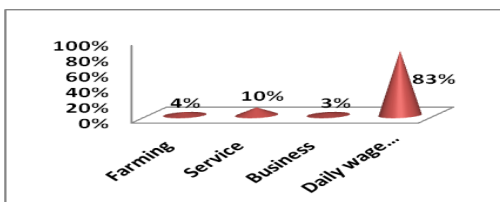


Fig. 1.5(a): Distribution of male respondents according to their occupational status

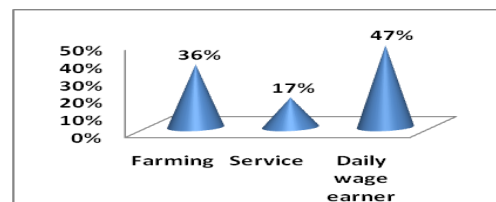


Fig. 1.5(b): Distribution of female respondents according to their occupational status

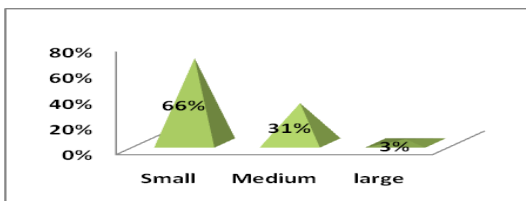


Fig. 1.1: Distribution of male respondents according to their family size

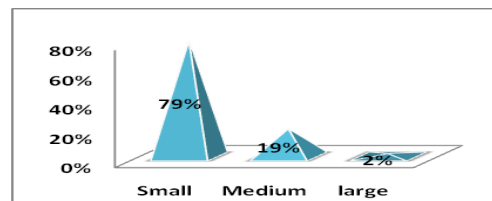


Fig. 1.1: Distribution of female respondents according to their family size

From Table 3, it is clearly indicates that 84 respondents use mobile everyday while 6 respondents use internet every day. Whereas 41 respondents watch television and 10 respondents listen to radio on daily basis. While 2 per cent each of the respondents use computer, CD/DVD, internet on daily basis but 2 per cent use their e-mail rarely for transmission of documents to others. Whereas, 81 respondents use mobile everyday while 2 respondents use internet every day. Whereas 34 respondents watch television and 3 respondents listen to radio on daily basis. While respondents they do not access or use kiosk/common service centres, computer, DVD/CD and e-mail because it was not available in their respective areas.

From Table 3, it is clearly reveals that both genders were attained favorable attitude towards ICT. Since majority of the respondents had favorable attitude towards ICT so they need to encourage little more by the ICT expertise providing them a short duration training or awareness programme on the use and importance of ICTs. This will help them to learn a valuable of ICTs in a different way of agriculture and allied activities. So there is no gender difference on overall attitude of respondents towards ICT or it can be said that both the genders have positive attitude towards use of ICT.

From Table 4, it is clearly indicates that 100 per cent of the male respondents have problems related due to lack of training on use of ICTs, lack of repairing centre's in the area and language problem followed by 98 per cent of the respondents belonged to high cost of repairing ICTs, 97 percent of the respondents belonged to technical illiteracy, 96 per cent each of the respondents belonged to erratic power supply, lack of knowledge on operating ICTs, language problem, 95 per cent of the respondents were lack of awareness about ICTs 87 per cent of the

respondents have a problem with high cost of net packs. Whereas, 100 per cent of the female respondents have problems related to lack of awareness about ICTs, erratic power supply, lack of knowledge on operating ICTs, lack of training on use of ICTs, lack of repairing centre's in the area, high cost of repairing ICTs technically illiteracy, language problem and ICT services are far away while 87 per cent of the respondents have a problem with high cost of net packs. So, far there was no problem related to cultural taboos.

From Table 5, it was found that the correlation of male respondents between age and the attitude towards ICT of respondents is negligible because the attitude towards ICT does not depend on age. Whereas the socio economic variables (namely; education, occupation, organizational memberships, mass media exposure, ownership of mobiles) were not correlated attitude towards ICTs. While the socio economic variables such as family income, organizational participation and ownership of mobile phones were weak negatively not correlated because all the mentioned variables have no positive effects towards ICT. So the correlation between extension contact and the attitude towards ICT has positive moderate relationships which means the respondents towards ICT on extension contact is there. So, far the correlation of female respondents between age and the attitude towards ICT of respondents is negligible because the attitude towards ICT does not depend on age. Whereas the socio economic variables (namely; education, occupation, family income, organizational memberships, organizational participation, extension contact, mass media exposure, ownership of mobiles) were weak negatively correlated because all the mentioned variables have no positive effects towards ICT. So their effect towards ICT is negligible.

From the study it was found that large percentages of the female respondents have mobile phones at their own compare to male respondents. According to their availability and use of internet services is more in number in male respondents (6%) than female respondents (2%).

Similarly the male respondents (2%) have computer and email at their own and use it for their personal purposes. So the female respondents were lack in knowledge of ICTs hardware compare to male respondents. It is clearly reveals that both genders were attained favorable attitude towards ICT.

Since majority of the respondents had favorable attitude towards ICT so they need to encourage little more by the ICT expertise providing them a short duration training or awareness programme on the use and importance of ICTs. This will help them to learn a valuable of ICTs in a different way of agriculture and allied activities. It was found that the correlation of male respondents between age and the attitude towards ICT of respondents is negligible because the attitude towards ICT does not depend on age whereas the correlation of female respondents between age and the attitude towards ICT of respondents is negligible because the attitude towards ICT does not depend on age. So their effect towards ICT is negligible.

The finding shows that by providing training or awareness programmes on different aspects of ICT hardware will be more useful and benefitted to their day to day life.

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