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Barriers in efficient functioning of mobile phone by the farmers of Faizabad district

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Abstract
This study conducted in the Milkipur tehsil of Faizabad district, Uttar Pradesh to know the barriers and remedial measures to overcome the barriers in usage of mobile phones by the respondents for the agricultural year 2015-16. Selection of the respondents had done by simple random sampling method and 25 respondents from each village had taken to make a total sample size of 250 from the list of ten purposively selected villages for collection of primary data. A well structured and pretested interview schedule was done for collection of data through personal interview method. The study indicates the major constraints like poor connectivity of network (2.91), mobile phones are too expensive to buy and run (2.64) and lack of knowledge about working system of mobile phones (2.55) which undertaken by the researcher as close ended questions after pretested survey.

Keywords: Mobile phone, interview schedule, simple random sampling, barriers and remedial measures

Introduction

In August 1995, the Chief Minister of West Bengal, Shri Jyoti Basu ushered in the cellphone revolution in India by making the first call to Union Telecom Minister Sukhram. Sixteen years later 4th generation services were launched in Kolkata.

Developing and under-developed nations understand the role of information and communication technologies (ICTs) for generating fast-paced growth while providing new and unimagined opportunities for previously disadvantaged populations. ICTs provide easy access to the wealth of human knowledge and to communication capabilities. The benefits of ICTs provide optimism for economically poorer citizens as there are numerous instances of 'clever services' enabled by inexpensive mobile phones, which are providing useful information, for example, about potentially harmful counterfeit drugs, which is of obvious benefit.

ICT can be defined as technologies that enable the handling of information and facilitate different forms of communication between human actors, human beings and electronic systems.

Overall, ICT is grouped together under two categories: the 'traditional' and the 'new'. Traditional ICTs are non-electronic media such as print and analogue technologies, including books and newspapers, radio, television, fixed-line telephones and facsimile machines. New ICTs consist of computers and the data processing applications accessible through their use: email, the internet, word-processing, mobile phones, wireless technologies and other data processing applications.

Approximately half of the phone calls made were for economic purposes such as obtaining market prices of commodities, employment opportunities, land-related and other business related transactions, and remittances. VPPs (Village Pay Phones) also facilitated development in other ways (Bayes *et al.* 1999) [3]; another study revealed that mobile phones were reducing travel needs, assisting job searching, improving access to business information, and contacts with families and friends (Samuel *et al.* 2005) [9]; indicated that 76.2%, 47.7% and 55.1% of the farmers used mobile phones to obtain information on vegetable crops in the North East, North West and South zones respectively. 62.0% use it 1-10 times a month, 22.0% use it 11-19 times and 8.4% use it more than 19 times a month while 7.6% do not use mobile phones. 77.2% considered usage cost as very high and 64.8% found irregular network another major problem (Odiaka, 2011) [7]; study indicated that the constraints of adoption of mobile phone included the cost of running a mobile phone and network failure. The study recommended accompany for adoption of mobile phones among poultry farmers, poultry farmers associations assistance on mobile phone ownership, extension network coverage to rural areas at lower rates and training of mobile phone operation. (Ofuoku *et al.* 2007) [8]; the main challenge to providing information services to rural area rests on providing dependable accurate information that is 'actionable'.

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Whether information is actionable depends especially upon what capital and what social connections are required to make use of it (Burrell, 2010) [4].

The above literature discussed by different researchers to identify the actual socio-economic status of farmers having mobile phone due to which necessary modification can take place by the police makers in the implementation of programme with reference to mobile phone. Keeping in view the above facts into consideration this study was undertaken on the following specific objectives;

1. To study the socio-economic profile of respondents
2. To identify the barriers and remedial measures to overcome the barriers in usage of mobile phones by the respondents

Research Methodology

The present study entitled "Barriers in efficient functioning of mobile phone by the farmers of Faizabad district" undertaken during the agricultural year 2015-16. The selection of the district Faizabad have done purposively as it is easily approachable by the researcher. Secondly the investigator was studying in N.D.U.A. & T. so, it was easier for him to collect the required information and easily adjust with cultural environments. Milkipur tehsil have two Community developmental blocks, out of these, both blocks had selected purposively. Five villages from each block had taken for the study randomly. Selection of the respondents is regarded as the benchmarks of social sciences for any research without this process research can never possible. Selection of the respondents had done by simple random sampling method and 25 respondents from each village taken to make a total sample size of 250. The researcher himself collected data with the help of semi-structured and pretested interview schedule. Analysis was done with the use of percentage, mean, standard deviation and correlation coefficient to see the relationship between different variables with farmers about using mobile phone.

Result

The findings and inferences drawn in respect to the specific objectives of the study on the basis of analysis of socio-economic profile, extent of contact with different information sources, constraints faced by the respondents in using of mobile phone and suggestive measures to overcome the constraints by using relevant statistical techniques. The findings of this study have been divided and discussed into following subhead.

Socio-economic profile of the respondents

The Table: 1. depicts that:

(A) Age- It is obvious from the Table-5.1.1 that majority of the respondents (64.80 %) were observe in the category of middle (35-53 years of age) followed by 20.40 % and 14.80 % for old (54 and above) and Young (up to 34 years of age), respectively.

(B) Education- The literacy percentage of respondents was 94.40 per cent and against it only 5.60 per cent respondents were illiterate. The ratio existing between literate and illiterate was found 16.86:1.

(C) Caste- Table 1.C indicates that maximum number of the respondents (40.80%) belonged to other backward caste, while the scheduled castes and general caste were 34.40 % and 24.80 %, respectively.

(D) Marital status- On the basis of the data collected, it may be concluded that almost every farmers who attain the age of 30 years was married. The ratio between unmarried and married was 1:18.23.

(E) Family type- The Table 1.E indicates that 58.80 percent respondents were residing in joint family system while remaining 41.20 per cent respondents were belong from single/nuclear family system.

Hence, it revealed the fact that the joint family system of rural society is now breaking up.

(F) Family size- It is evident from Table-1.F that 60.80% of the respondents were observe such who had 6 to 11 members in their family followed by 20.80% family having up to 5 members and only 18.40 % respondents family having 12 and above members in their family.

(G) Housing pattern- Pertaining to the type of houses possessing that 45.20 per cent respondents having their houses of mixed types, followed by 43.60 per cent were residing in pucka houses and 11.20 per cent were such who had kaccha houses, respectively.

(H) Size of land holding- The maximum number of respondents (53.60%) were belonging from the land holding category *i.e.* marginal farmers (below 1.0 ha) followed by 20.40 per cent respondents found in the category of small farmers (1-2 ha), 15.60% respondents from medium category of land holding (2-4 ha) and only 10.40% of the respondents who belongs from large size of land holding in this study, respectively. The average size of land holding of the respondents found 1.42 ha.

(I) Annual family income- The maximum (84.40%) of the respondents were from those families whose annual family income were between Rs. 57001 to 266999 and belonged from the medium categories followed by large categories *viz.*, 14.00 per cent (Rs. 267000 and above) and only 1.60 per cent respondent were who belonged from low categories of income (Up to Rs. 57000), respectively. The average income was observed to Rs. 162190.80 with a range of minimum Rs. 25000 and maximum Rs. 540000.

(J) Ownership of mobile phone- The maximum number of respondents (60.40%) have mobile phone before more than 36 months followed by 15.60% who were use of mobile phone between 24 to 36 months, 12.40% of the respondents were use of mobile phone between 12 to 24 months and only 11.60 respondents who were use of mobile phone before less than 12 months from the time of survey, respectively.

(K) Occupation- In case of main occupation, the agriculture was emerged as main occupation (57.20%) followed by service (11.20%), agro-based enterprise (9.60%), business (8.40%), agriculture labors (7.60%) and caste based occupation (6%) as their main occupation while, in case of subsidiary occupation, the maximum 31.20 per cent of the respondents adopted agriculture as their subsidiary occupation, followed by agro-based enterprise (26%), caste based occupation (19.20%), business (12%), service (9.60 %) and agriculture labour (2%), respectively.

(L) Social participation- A cursory glance over the data depicted in the table 5.1.12 indicates that out of 250

respondents, 42.40 per cent respondent's participation in one organization followed by participation in two organizations (19.20%) and participation in more than two organizations (14%), respectively. There were (24.40%) respondents who have no participation in any organization.

(M) Overall material possession: The overall material possession was categorize into three main categories on the basis of scores as low (up to 14), medium (15-36) and high (37 and above). The data given in Table-5.1.18 revealed that highest number of the respondents (69.60%) observed in the medium category (15-36 scores) of materials possession followed by high (16.40%) and low (14%) categories, respectively. Thus, it can be concluded that the materials possession of respondents was appreciably better. The mean of scores for materials possession observed to 25.60 with a minimum 8 and maximum 57 (scores).

2. Extent of contact with different information sources

The data furnished in Table-2 pertains to extent of context of respondents with different information sources as used by them for receiving general information as well as about various practices of agriculture and its allied sciences. Information sources were categorized in three categories namely formal sources, informal sources and mass media exposure to find out the extent of contact of respondents. So for as contact with formal sources was concerned, Gram Pradhan, Kisan Sahayak, VDOs, cooperative societies, mandi samiti, fertilizers/ seed stores, ADOs, SDEOs, Agril. school/ college, SDAEO, BDOs, Agril. Scientists and DAOs got the rank orders I, II, III, IV, V, VI, VII, VIII, IX, X, XI and XII, respectively. The mean of scores for all the formal sources was found as 1.89.

As for as contact with informal sources was concern, family members, neighbours, friends, local leaders, progressive farmers, and relatives got rank order I, II, III, IV, V and VI respectively. The mean of scores for informal information sources found as 4.30.

Among the mass media exposure Mobile phone, T.V, Radio, Newspaper, News bulletin, Magazines, Poster, Demonstration, Farmers fair, Circular letter, Folders, Exhibition and Computer/Laptop got rank order I, II, III, IV, V, VI, VII, VIII, IX, X, XI, and XIII, respectively. The mean of scores for mass media exposure was found as 2.15.

In support of the study the research conducted by (Sawarkar *et al.* 2001) indicates that mass media, *viz.,* posters, radio, television and group media, *viz,* meetings and individual media, *viz.,* Live stock development officer, friends, relatives and progressive farmers, were the different sources of technical information about breeding, feeding, animal health care, management and fodder production, for tribal dairy farmers.

Hence, it can be concluded that informal sources of information seemed to be most important as generally utilized by most of the respondents. The formal and mass media information sources were also utilized by the respondents with considerable extent. The overall mean of scores for formal, informal and mass media information sources was found to be 2.78 which may be considered as fair contact with information sources. Almost same finding was reveal by (Das *et al.* 2012) [5] that considerable contact of farmers with the progressive farmers (43.3%).

3. Constraints faced by the respondents in using of mobile phone

The Table-3 reveals that out of eleventh constrains faced by farmers of Milkipur tehsil about using mobile phone, the constraints like poor connectivity of network (2.91) got ranked first followed by mobile phones are too expensive to buy and run (2.64) was ranked of second and lack of knowledge about working system of mobile phones (2.55) was ranked at third, IVth rank to lack of electric power for charging mobile phones (2.53), Vth rank to poor financial condition of farmers (2.51), VIth rank to lack of awareness of whom to call for a particular (2.48), VIIth rank to lack of practical exposure to situation (2.41), VIIIth rank to complexity of the mobile phone technology (2.38), IXth rank to lack of self confidence in handling mobile (2.32), Xth rank to illiteracy of mobile phone users (2.12) and hesitation regarding communicating with officials (2.11) XIth rank, respectively.

Same result was finding by the researcher in support of the study. Despite the positive effects associated with the use of ICT tools for augmenting livelihood opportunities, electric power and cost are encumbering factors (Aminuzzaman *et al.* 2003) [1]. The challenges such as network failure, non-availability of recharge cards, unreliable or complete absence of power supply to charge batteries, high charge by network service providers, stealing of mobile phones, and unskilled persons repairing phones in rural areas. The introduction of mobile phones has lead to reduction of rural-urban migration by many jobless youths (Baro & Endouware, 2013) [2].

4. Suggestive measures to overcome the constraints faced by the farmers in using of mobile phone

The table-4 furnished the suggestive measures as stated by the farmers having mobile phone to overcome the constraints in using of mobile phone can be placed in a descending order *viz.,* there should be low call rates and tariffs Ist (3.14) followed by Poor network quality should be avoided IInd (3.05), Government should provide more need based agriculture information via SMS, Audios and Videos IIIrd (3.04), Short term training should be provided to farmers to know about operating system of mobile phones IVth (3.00), Proper amount of electricity should be available in the villages Vth (2.89), Use of local dialect in the functioning of mobile phone VIth (2.70), Government should provide mobile phone on low price or freely to empower farmers VIIth (31), Increase literacy level of mobile phone users VIIIth (2.34), Internet services should be easily accessible on low cost IXth (2.24), and Government, through its various schemes should giving special emphasis on building rural communication infrastructure Xth (2.23), respectively.

To increase the level of literacy of farmers in developing countries, government, and NGOs should take a serious step and provide such type of the education programs which are totally free. These education programs should provide books and materials and adhere to the international standards and also have professional education materials. It is also important that training for skill development should be given to the farmers for the mobile phone application development. The concerned department should promote their mobile applications and help to improve the agriculture business so that farmer's living standard will rise. So that their family has better food, their children have good education, better health facilities and do better in their agriculture business (Kenny, 2002) [6].

Table 1: Socio-personal, economic and psychological profile of the respondents: N=250

S. No.	Variables	Percentage of the respondents	Mean	Standard Deviation	Minimum	Maximum
	Socio-personal profile of respondents					
A.	Age		44.25	9.87	26	68
	I. Young (Up to 34 years)	14.80				
	II. Middle (35 to 53 years)	64.80				
	III. Old (54and above years)	20.40				
B.	Education					
	I. Illiterate	5.60				
	II. Literate	94.40				
	a. Can signature only	2.12				
	b. Can read and write	11.02				
	c. Primary	27.12				
	d. Middle	19.49				
	e. High school	11.44				
	f. Intermediate	17.37				
	g. Graduate	9.75				
	h. Post graduate	1.60				
C.	Caste composition					
	I. General caste	24.80				
	II. Other Backward caste	40.80				
	III. Scheduled caste	34.40				
D.	Marital status					
	I. Married	94.80				
	II. Unmarried	5.20				
E.	Family type					
	I. Single family	41.20				
	II. Joint family	58.80				
F.	Size of family		8.31	3.53	3	17
	I. Small (up to 5 members)	20.80				
	II. Medium (6-11)	60.80				
	III. Large (12 and above)	18.40				
G.	Housing pattern.					
	I. Kachcha	11.20				
	II. Mixed	45.20				
	III. Pucka	43.60				
H.	Land holding		1.42			
	I. Marginal(below 1 ha)	53.60				
	II. Small(1 to 2 ha)	20.40				
	III. Medium(2 to 4 ha)	15.60				
	IV. Large(4 ha and above)	10.40				
I.	Family annual income (Rs.)		162190.80	105242	25000	540000
	I. Small (Up to 57000)	01.60				
	II. Medium (570001 to 267500)	84.40				
	III. Large (257001 and above)	14.00				
J.	Ownership of mobile phone					
	I. Less than 12 months	11.60				
	II. 12 - 24 months	12.40				
	III. 24 - 36 months	15.60				
	IV. More than 36 months	60.40				
K.	Occupation					
	I. Agriculture based labour	07.60				
	II. Caste based occupation	06.00				
	III. Service	11.20				
	IV. Agriculture	57.20				
	V. Agro based enterprise	09.60				
	VI. Business	08.40				
L.	Social participation					
	I. No participation	24.40				
	II. Participation in one organization	42.40				
	III. Participation in two organization	19.20				
	IV. Participation in more than two organization	14.00				
M.	Overall material possession		25.6	11.79	8	57
	I. Low (up to 14)	14.00				
	II. Medium (15-36)	69.60				
	III. High (37 and above)	16.40				

Table 2: Distribution of the respondents according to extent of contact with different information sources, N=250

S. No.	Categories of information sources	Mean score value	Rank order
	A. Formal sources		
1.	B.D.O.	1.32	X
2.	S.D.E.O.	1.24	IX
3.	A.D.Os	1.57	VII
4.	V.D.Os	2.00	III
5.	Kishan sahayak	3.50	II
6.	Gram pradhan	4.27	I
7.	Cooperative societies	1.99	IV
8.	Agril. school/ College	1.44	VIII
9.	Mandi samiti	1.63	V
10.	Fertilizer / Seed store	1.61	VI
11.	Agril. Scientist	0.91	XI
12.	D.A.Os	0.58	XII
	Average	1.89	
	B. Informal sources		
1.	Family members	5.72	I
2.	Neighbours	5.11	II
3.	Friends	4.65	III
4.	Relatives	3.17	VI
5.	Local leaders	3.58	IV
6.	Progressive farmers	3.57	V
	Average	4.30	
	C. Mass media exposure		
1.	Radio	3.62	III
2.	T.V.	4.97	II
3.	News paper	3.46	IV
4.	News bulletins	3.27	V
5.	Magazines	1.26	VI
6.	Circular letters	0.98	X
7.	Posters	1.09	VII
8.	Farmers fair	1.00	IX
9.	Exhibitions	0.82	XII
10.	Demonstration	1.01	VIII
11.	Folders	0.83	XI
12.	Mobile phones	5.24	I
13.	Computer/Laptop	0.47	XIII
	Average	2.15	

Table 3: Constraints faced by the respondents in using of mobile phone: N=250

S. No.	Constraints	Total score	Mean score value	Rank order
1.	Mobile phones are too expensive to buy and run.	660	2.64	II
2.	Lack of electric power for charging mobile phones.	633	2.53	IV
3.	Poor connectivity of network.	728	2.91	I
4.	Lack of knowledge about working system of mobile phones.	637	2.55	III
5.	Poor financial condition of farmers.	627	2.51	V
6.	Hesitation regarding communicating with officials.	528	2.11	XI
7.	Complexity of the mobile phone technology.	596	2.38	VIII
8.	Illiteracy of mobile phone users.	529	2.12	X
9.	Lack of awareness of whom to call for a particular need.	619	2.48	VI
10.	Lack of self confidence in handling mobile.	580	2.32	IX
11.	Lack of practical exposure to situation.	603	2.41	VII

Table 4: Suggestive measures to overcome the constraints faced by the farmers in using of mobile phone: N=250

S. No.	Suggestive measures	Total score	Mean score value	Rank order
1.	Poor network quality should be avoided.	763	3.05	II
2.	Proper amount of electricity should be available in the villages.	722	2.89	V
3.	Use of local dialect in the functioning of mobile phone.	674	2.70	VI
4.	Short term training should be provided to farmers to know about operating system of mobile phones.	751	3.00	IV
5.	There should be low call rates and tariffs.	784	3.14	I
6.	Government should provide mobile phone on low price or freely to empower farmers.	588	2.35	VII
7.	Internet services should be easily accessible on low cost.	560	2.24	IX
8.	Increase literacy level of mobile phone users.	586	2.34	VIII
9.	Government should provide more need based agriculture information via SMS, Audios and Videos.	759	3.04	III
10.	Government, through its various schemes should giving special emphasis on building rural communication infrastructure.	557	2.23	X

Discussion
The finding of the study stated that the young generation do not like to do the farming but they were more aware about using mobile phone in agricultural sector in comparison of middle and old age holders. There is an urgent need of giving training to the farmers about functioning of mobile phone, to fulfil the knowledge gap among them. Hence, this class of people should be encouraged and properly facilitated through farmers; training programmes youth organizations and government mechanics so that the most powerful and energetic group can be better utilized in the most potential profession of agriculture and its allied section. There is need to establish new technologies centres and media houses for dissemination the agriculture information among farmers in rural areas. Furthermore, there is shortage of electricity in remote areas have also decreased the agriculture production therefore it is also important to create alternative sources for increase the agriculture production in these countries such as solar energy system for agriculture development.

Acknowledgment

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