



Research Article

CONSTRAINTS AND SUGGESTIONS BY FARMERS DURING ACCESSIBILITY OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTS): STUDY IN HARYANA

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Abstract- The present study was carried out in four district of Haryana state i.e., Yamunanagar, Karnal, Hisar and Fatehabad, which were selected randomly. Radaur and Chhachroli, Indri and Nilokheri block were selected with villages Bakana, kandroli and Bhagwanpur, Sherpur, Kalri, Kukhnai and Barhtal, Raipur from Yamunanagar and Karnal. Similarly, Hisar I and Hisar II, Bhattu and Fatehabad block were selected with villages Sathrod, Mizapur and Balsamand, Budhak, Dhand and Bnawali, Daulatpur and Hizrawan from Hisar and Fatehabad. The major constraints were found Lack of confidence in operating of ICTs due to less exposure and lack of awareness of how to properly use ICTs in order to derive its benefits. Majority of farmers suggested that the training programme related to ICT for farmers because they felt that the constraint is due to lack of training to farmers in the use of ICTs.

Keywords- ICT, Accessibility, Constraints and suggestions.

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Introduction

The information need of Indian farmers across the country is varied. Introduction of Information and Communication Technology (ICT) enables the dissemination of required information at the right time. This revolution in information technology has made access to the information easy and cost-effective. ICT initiatives still require significant improvements in supporting infrastructure and capacity building amongst farmers to access the desired information effectively [1].

Material and Methods

In total 240 respondents viz., 60 farmers from each district, 30 farmers from each block and 15 farmers from each village were selected for present study. Each of the selected respondents was interviewed personally. Interview for data collection with the help of interview schedule was generally conducted at the farmers' houses and occasionally also at their farms when they were free to talk to the researcher. The researcher had to make repeated visits to the study area with a view to develop sufficient rapport with the farmer. Computer facilities were availed to work out Percentage, weighted mean, coefficient of correlation, multiple regression analysis etc. The correlation coefficient between the dependent and independent variables were calculated with the help of Pearson's formula of correlation coefficient. Multiple regression equation was fitted to find out the amount of variation caused by Independent variables constituting personality traits of respondents on dependent variables. On the basis of statistical analysis, conclusions were drawn and report writing was done keeping in view the objectives of the study.

Availability/Accessibility of ICT tools among farmers

As shown in [Table-1], the availability/accessibility of mobile among the farmers was 100 per cent while television was found 60 per cent available/access by farmers. 29.58 per cent FM/Radio, 24.17 per cent internet and 19.17 per cent

Whatsapp were available/access by the farmers. Mobile phone camera was found 14.17 per cent followed by face book (7.91%), YouTube (6.25%), Computer (5.42%), E-mail (4.58%), E-book (2.50%) and CD/VCD (1.66%) available/access by the farmers. Similar result was found by [2] emphasized the use of ICTs in boosting agricultural production among farmers. Farmers who were hooked up to new technologies fared better. ICTs promoted access to and sharing of information in agriculture and allied fields. ICTs included the use of radio, television and computer/internet, global system of mobile telecommunication (GSM) and the other fixed telephone network, fax, etc.

Table-1 Availability/Accessibility of ICT tools among farmers n=240

Sr. no.	Tools	Frequency (Percentage)
1	Mobile	240(100)
2	T.V	144(60.00)
3	Mobile camera	34(14.17)
4	F.M/Radio	71(29.58)
5	Internet	58(24.17)
6	Whatsapp	46(19.17)
7	Facebook	19(7.91)
8	Youtube	15(6.25)
9	E-mail	11(4.58)
10	Computer	13(5.42)
11	E-book	6(2.50)
12	CD/DVD	4(1.66)

Figures in parentheses indicate percentages

The perusal of data in [Table-2] depicts the correlation and regression coefficient between availability/accessibility of ICTs and independent variables of farmers. The data revealed that the variables education(0.559), socio-economic status(0.575), land holding(0.036), extension contact(0.601), mass media exposure

(0.581), scientific orientation (0.532), economic motivation (0.536) and risk orientation (0.571) exhibited positive and significant where as age (0.584) exhibited negative significant but irrigation facilities(0.070) non-significant but positively correlated with availability/accessibility of ICTs by farmers. Similarly regression coefficient of variables education (0.549), Socio-economic status (2.237), extension contact (2.401), mass media exposure (1.030), scientific orientation (1.227), economic motivation (2.827) and risk orientation (1.376) exhibited positive and significant and age (1.404), land holding (0.171) and irrigation facilities (0.665) negatively significant with availability/accessibility of ICTs by farmers. Similar finding by [3] farmers had a clear and favourable perception of the relevance of ICTs in extension service delivery. Farmers' education level and income had a positive significant relationship with the number of ICTs farmers in Imo State had access to. It is therefore recommended that ICT education should be included into the extension delivery package of extension agents to farmers particularly the use of the mobile phone since this is capable of eliminating the series of wasteful trips to get at the extension workers and vice versa.

Table-2 Relationship between respondent's personal variables and availability/accessibility of ICTs tools by farmers

Sr. No	Variables	Correlation coefficient (r)	Regression coefficient	t' values
1	Age	-0.584*	-0.071	-1.404*
2	Education	0.559**	0.225	0.549*

3	Socio-economic status	0.575**	0.342	2.237**
4	Landholding	0.036*	0.017	-0.171*
5	Irrigation facilities	0.070 ^{ns}	-0.117	-0.665*
6	Extension contact	0.601**	0.564	2.401**
7	Mass media exposure	0.581**	0.327	1.030*
8	Scientific orientation	0.532**	-0.198	1.227*
9	Economic motivation	0.536**	-0.759	2.827**
10	Risk orientation	0.571**	0.252	1.376*

* Significant at 5% level of significance and, ** Significant at 1% level of significance R²= 0.4044

An examination of the data presented in [Table-3] indicates that constraints faced by farmers during access and usages pattern of ICTs by farmers. The major constraints were found Lack of confidence in operating of ICTs with weighted mean 2.28(rank I) followed by the erratic power supply(2.25), lack of awareness benefits of ICTs(2.16), poor internet connectivity(2.15), lack of skill in handling of ICTs(2.12), lack of training programme(2.02), low literacy(1.99), lack of insufficient tools(1.95), no finance by Government(1.93), lack of repairing at village level(1.92), highly cost(1.84), negative attitude toward ICTs tools(1.83), lack of information in regional language(1.74) with rank II,III,IV,V,VI, VII, VIII, IX, X, XI, XII, XIII, respectively.[4]Studies have pointed out that women have lesser resources and less income available to secure the use of ICTs. Illiteracy, lack of electricity and poor infrastructure are just some of the challenges that have been preventing rural women from gaining the benefits from ICTs.

Table-3 Constraints faced by farmers during access and usage of ICTs

Sr. No.	Category	Very serious(3)	Serious (2)	Not so serious (1)	Weighted frequency score	Weighted mean	Rank	Average weighted mean
1.	Lack of confidence in operating of ICTs	98(294)	106(212)	36(36)	546	2.28	I	2.01
2.	Erratic Power supply	106(318)	87(174)	47(47)	539	2.25	II	
3.	Poor internet connectivity	97(291)	81(162)	62(62)	515	2.15	IV	
4.	Lack of awareness benefits of ICTs	99(297)	80(160)	61(61)	518	2.16	III	
5.	Lack of skill in handling of ICTs	96(288)	77(154)	67(67)	509	2.12	V	
6.	Lack of training programme	89(267)	78(156)	73(73)	485	2.02	VI	
7.	Negative attitude toward ICTs tools	67(192)	74(148)	99(99)	439	1.83	XII	
8.	Highly cost	63(189)	74(148)	103(103)	440	1.84	XI	
9.	Lack of information in regional language	58(174)	61(122)	121(121)	417	1.74	XIII	
10.	Low literacy	80(240)	77(154)	83(83)	477	1.99	VII	
11.	Lack of insufficient tools	72(216)	84(168)	84(84)	468	1.95	VIII	
12.	No finance by Government	73(219)	78(156)	89(89)	464	1.93	IX	
13.	Lack of repairing at village level	66(198)	91(182)	83(83)	463	1.92	X	

Figures in parentheses indicate weighted score.

An examination of data in [Table-4] indicates suggestions given by farmers to improve the access and usages pattern of ICTs. The data revealed that majority of farmers suggest the Training programme related to ICT for farmers weighted mean 2.13 with rank I followed by sufficient funding for ICT at village level (2.10), improve internet connection (2.02), sufficient number of ICT tools at village level (1.97), aware farmers about benefits of ICT tools(1.93), provide technical staff at village level (1.89), marketing information should be through ICT tools (1.82), provide all agriculture department information at village level (1.80), touch screen

tools provide at village level(1.77), village knowledge centre develop at village level (1.70), forecast all department information(1.65), information should in regional language(1.58) with rank II,III,IV,V,VI,VII,VIII,IX,X,XI,XII, respectively. Similar finding by [5] suggestions provided by the users regarding the improvisation of ICT tools utilization were imparting training to employees regarding the use of ICT tools, up gradation of equipment, provision of sufficient funding for ICT, provision of latest infrastructure, provision of better Internet connectivity, availability of sufficient number of ICT tools and ICT tools to be made available at field level.

Table-4 Suggestion by farmers to improve the access and usage pattern of ICTs

Sr. No.	Category	Very serious(3)	Serious (2)	Not so serious (1)	Weighted frequency score	Weighted mean	Rank	Average weighted mean
1.	Training programme related to ICT for farmers	79(237)	113(226)	48(48)	511	2.13	I	1.86
2.	Sufficient funding for ICT at village level	78(234)	108(216)	54(54)	504	2.10	II	
3.	Improve internet connection	73(219)	100(200)	67(67)	486	2.02	III	
4.	sufficient number of ICT tools at village level	71(213)	91(182)	78(78)	473	1.97	IV	
5.	Aware farmers about benefits of ICT tools	68(204)	88(176)	84(84)	464	1.93	V	
6.	Provide technical staff at village level	62(186)	89(178)	89(89)	453	1.89	VI	
7.	Marketing information should be through ICT tools	58(174)	81(162)	101(101)	437	1.82	VII	
8.	Provide all agriculture department information at village level	55(165)	83(166)	102(102)	433	1.80	VIII	
9.	Touch screen tools provide at village level	50(150)	74(148)	116(116)	414	1.77	IX	
10.	Village knowledge centre develop	49(147)	70(140)	121(121)	408	1.70	X	
11.	Forecast all department information	44(132)	67(134)	129(129)	395	1.65	XI	
12.	Information should in regional language	43(129)	53(106)	144(144)	379	1.58	XII	

Figures in parentheses indicate weighted score.

Conclusion

The availability/accessibility of mobile among the farmers was 100 per cent followed by television, FM/Radio, internet, Whatsapp; Mobile phone camera was found, face book, YouTube, Computer, E-mail, E-book and CD/VCD available/access by the farmers. The frequency use mobile phone by farmers was found high followed by TV user, FM/Radio, followed by television, FM/Radio, internet, Whatsapp; Mobile phone camera was found, face book, YouTube, Computer, E-mail, E-book and CD/VCD. major constraints were found Lack of confidence in operating of ICTs followed by the Erratic Power supply, Lack of awareness benefits of ICTs, Poor internet connectivity, Lack of skill in handling of ICTs, Lack of training programme, Low literacy, Lack of insufficient tools, No finance by Government, Lack of repairing at village level, Highly cost, Negative attitude toward ICTs tools, and Lack of information in regional language. majority of farmers suggest the Training programme related to ICT for farmers followed by Sufficient funding for ICT at village level, Improve internet connection, sufficient number of ICT tools at village level, Aware farmers about benefits of ICT tools, Provide technical staff at village level, Marketing information should be through ICT tools, Provide all agriculture department information at village level, Touch screen tools provide at village level, Village knowledge centre develop at village level, Forecast all department information and Information should in regional language.

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