

Effectiveness of Information and Communication Technology based Advisory Services in Addressing Information Need of Rural Women: A Case of Connecting Dream Foundation

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ABSTRACT

Over the period of time many information and communication technology based projects have emerged in India, supplemented traditional extension services by providing information to various stakeholders. But accessibility of information remain a challenge for most of the people particularly rural women because of poor infrastructure support, illiteracy, lack of skilled and many others. This creates an information gap between men and women and this gap was more wide for rural women. Information and communication technologies and tools have potential to provide solution to existing information asymmetry in various lagging sectors like agriculture and can ensure more equitable information share and thus helps in empowering rural women. Connecting Dream Foundation (an NGO's) ICT based project have made significant contribution in information dissemination on diverse range of subjects and thus helps in reducing information gap for rural women by focusing on women information needs. The present study was undertaken for assessing its effectiveness in information dissemination and advisory services to rural women in two districts of Uttar Pradesh Hapur and Ghaziabad where Connecting Dream Foundation was working since last four years. Data were collected from 120 respondents (rural women) who were associated with CDF. The effectiveness was measured by effectiveness index developed for the purpose. The study revealed that the advisory services rendered by Connecting Dream foundation was found effective.

Key words: Advisory services, connecting dream foundation, information gap, information and communication technology

INTRODUCTION

Information and knowledge significantly contributes in bringing about social and economic development of people and it has been well recognized globally. However, despite great benefit offered by information and knowledge, communicating this relevant knowledge and information to rural communities and particularly to rural women continues to remain as a major challenge even today, although connectivity has been vastly improved over period of time and we are more globally connected than ever before. The advent of

new age Information and Communication Technologies (ICTs), especially, personal computers, the internet and mobile telephone during the last two decades has provided a much wider choice in collection, storage, processing, transmission and presentation of information in multiple formats to meet the diverse requirement and skills of users. We are currently witnessing a revolution in both the media as well as the ICTs. There are number of previously conducted studies suggested about the potential benefit offered by these modern Information and Communication Technology are tools for rural

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development and information empowerment of society and particularly rural women. However, the contradiction between the potential for ICTs to address the challenges faced by rural development and the current failure to harness them for this purpose is striking (Chapman and Slaymaker, 2002). There is an increasing realization of digital divide, which is the gap between those who have access to technology and those who do not access technology, digital gap between women and men in society and a social divide among the information rich and poor in societies (Huyer and Mitter, 2003). Out of number of possible solution, Information and communication technology (ICT) Could be most prudent and this has recently unleashed incredible potential to improve rural condition by providing need based information in developing countries specifically.

Among modern ICT modes, mobile phone has been most recent and widely accepted mode of delivering information (Mittal, 2012). Increasing mobile phone based services enhances the availability to knowledge and information in agriculture and meets the increasing information demand of the farmers. It further helps in improving awareness, education, better adoption of technology, better health and efficiency, reduced transaction costs, better market efficiencies, *etc.*

Because of the potential benefit offered by Information and Communication Technologies, the policy framework for agricultural extension (Ministry of Agriculture, Govt. of India, 2000) highlights the opportunity for information and communication technology (ICT) to improve the quality and accelerate the transfer and exchange of information to farmers, and as a result of this ICT is given a high priority, particularly as a tool for improving the marketing aspects of farm enterprises and tools for serving information need of people specifically disadvantageous group like rural women. Currently there are number of ICT based projects are going on, in India, with some very innovative models in various sector from rural development to agriculture. The modes for providing information vary in different ICT

projects. The approach adopted by Connecting Dream Foundation (CDF) is different from all other projects. Connecting-Dreams Foundation (CDF) is a non-profit foundation registered and licensed under section 25 of the Companies Act, 1956, Government of India, established in the year 2013. The connecting dream foundation strives to bridge the gap between the rural and urban India by setting up sustainable models of education, healthcare and livelihood. The foundation aims to empower youth and women in rural India through connectivity and entrepreneurship.

The CDF through Apna Tech Tree (ATT) a internet enabled computer device with facility of audio and video conferencing disseminates a wide range of personalized information to the rural women. Rural women wants an end-to-end service and expects personal attention and occasional visit by expert once in a while. This innovative approach was visualized to increase income, improve the efficiency of markets, reduce transaction costs, and offer a great opportunity for innovative interventions, especially in advisory service. Keeping these points in view, the present study was conducted to assess the effectiveness of Connecting Dream Foundation (CDF) in information and technology dissemination to the rural women.

METHODOLOGY

The study was conducted in the state of Uttar Pradesh. From the selected state *i.e.*, Uttar Pradesh two districts Hapur and Ghaziabad were selected purposively since the Connecting Dream Foundation was working there since it was first started in 2013. From the above stated two district 2 villages from each district were selected purposively. Simple Random sampling technique was adopted to select the respondents which were rural women. The respondents for the study were the subscribers of Connecting Dream Foundation ICT based initiative. From each selected villages 20 respondents were selected using simple random sampling technique. Thus, a total of 80 respondents were randomly selected for the study. The data were collected through survey method using interview schedules (structured

and semi- structured).

RESULTS AND DISCUSSION

The perception of the rural women who were associated with the Connecting Dream Foundation were taken on all the dimension of the effective index. The parameter of the effectiveness index are Timeliness of Information (TI), Utility of Information (UI), Satisfaction of Information (SI) and Ease of Understanding (EU).

Timeliness of information:It referred to the availability of the technology and the services provided by Connecting Dream Foundation at the appropriate time to the rural women in terms of their specific needs and resources. The perceptions of the respondents (beneficiary rural women) were collected through the schedule. The data obtained were presented in the following Table 1.

Table 1: represented the responses of the rural women beneficiary of Connecting Dream Foundation (CDF) services on the timeliness of the services offered by organization. The data showed that 70 per cent rural women responded that information regarding the health issues was provided timely while

12.5 per cent rural women beneficiary perceived that it was provided very timely and only 3.75 per cent of them reported that it was not timely provided. Almost 68 per cent rural women beneficiaries perceived that information regarding entrepreneurial opportunity and training was provided timely while 16.25 per cent respondents felt that it was provided very timely. As for as information regarding availability of credit/ financial literacy is concerned, 66.25 per cent rural women perceived, it was provided timely while, 12.5 per cent respondents reported that it was very timely. Only 2.5 per cent of the respondents felt that information related to entrepreneurial activity and credit was not provided timely. Almost seventy three per cent (72.5%) respondents reported that information regarding the government schemes and services was provided in time while 10 per cent felt that it was provided very timely. Only 3.75 per respondents responded negatively that is information regarding government services was not provided timely. So from the analysis of the above mentioned data it is clearly indicated that information on various issues was timely provided by the Connecting Dream Foundation (CDF).

Table 2 depicted the mean, standard deviation and

Table 1: Distribution of Rural Women Beneficiaries on perceived effectiveness: Timeliness of the information/ Services: (n=80)

S.No.	Type of Services	VT		T		ST		NT	
		f	%	f	%	f	%	f	%
	Information related to health issue and health awareness	10	12.5	56	70	11	13.75	3	3.75
	Information regarding entrepreneurial opportunities and trainings	13	16.25	54	67.5	11	13.75	2	2.5
	Information related to credit access and financial literacy	10	12.5	53	66.25	15	18.75	2	2.5
	Information about government schemes and services.	9	11.25	58	72.5	10	12.5	3	3.75

VT=Very Timely, ST= Somewhat Timely,NT=Not at all timely.

Table 2: Descriptive Statistics of Timeliness of the Information Provided by CDF (n=80)

Statistics	IHI	IEA	IRC&FL	IGS
Mean	2.91	2.98	2.89	2.91
Standard Deviation	0.64	0.64	0.64	0.62
C. V (%)	21.98	21.38	22.04	21.29

IHI = Information regarding health issues, IEA=information regarding entrepreneurial activity/opportunity and training, IRC&FL=Information related to Credit and Financial literacy IGS = Information about Govt. Schemes and Services.

coefficient of variation with regard to the timeliness of the information provided by the CDF. The mean score for the entrepreneurial information was 2.98, which denotes that respondents (beneficiary rural women) were getting the information regarding the entrepreneurial activity/opportunity on time, followed by information on government schemes and information regarding health and issues with mean, 2.91 each, which signifies that the information was available on time. The coefficient of variation for information about all the parameters was consistent because of low coefficient of variation among the various mentioned parameter.

Quality of Information

It was operationally defined as the degree or level of excellence of the information provided by CDF expert as perceived by the rural women according to their needs and particular situations. The perceptions of the respondents were collected through the schedule. The data obtained are presented in the following table:

Table 3. Represented the response of the rural women regarding the quality of information provided by CDF through ATT. It showed that 33.75 per cent

respondents perceived that quality of information regarding entrepreneurial opportunity/training was good while 40.00 per cent rural women beneficiary perceived that it was very good whereas 12.50 percent respondent found not at all good., As for as quality of financial literacy related information is concerned 85 per cent respondents said that quality of information was good while 7.5 percent found it moderately good. Large majority of the respondents (81.25%) found information on marketing and designing of the produce of good quality while 8.75 percent people reported it was not good at all. So majority of the respondents found quality of information delivered by Connecting Dream Foundation(CDF) on range of subjects were of good quality and helpful in changing people life.

Table 4 depicts the mean, standard deviation and coefficient of variation in the opinion regarding quality of information provided by CDF through Apna Tech Tree(ATT). The mean score related to digital information was the 3.06, which signifies that the quality of information was very good, followed information related to entrepreneurial training related information, for which mean score was 3.50 which signifies that the quality information was very good.

Table 3: Distribution of Rural Women Beneficiaries on Effectiveness: Quality of the information/services

(n=80)

S.No.	Services	Not at all good		Moderately Good		Good		Very Good	
		<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%
	Information/Services on entrepreneurial opportunity/activity	10	12.50	32	13.75	11	33.75	27	40.00
	Information/Services on digital literacy	0.00	0.00	7	8.75	61	76.25	12	15.00
	Information/Services related financial literacy	3	3.75	6	7.50	68	85.00	3	3.75
	Information/Services on marketing, designing and packaging of produce	7	8.75	5	6.25	65	81.25	3	3.75

Table 4: Descriptive Statistics Regarding Quality of the Information/Services Provided by CDF

(n=80)

Statistics	Inf. Related to Entrepreneurial opp./training/activity.	Inf. related to Digital literacy	Inf related to Financial literacy	Inf. on Marketing, Designing and Packaging of produce
Mean	3.01	3.06	2.89	2.95
Standard Deviation	1.02	0.49	0.50	0.55
C. V (%)	34.02	15.88	17.42	18.61

The coefficient of variation for information related to entrepreneurial opportunity/training/was high (34.02%) which signifies that data were relatively inconsistent among the rural women. But the other parameters were consistent because of low coefficient of variation.

Utility of the Information

It was operationally defined as the degree to which the information provided by Connecting Dream Foundation (CDF) is useful in resolving rural women’s problems according to their specific needs. The perceptions of the respondents were collected through the schedule. The data obtained are presented in the following table.

Table 5 represented the response of the respondents(rural women) regarding utility of information provided by the Connecting Dream Foundation. The data showed that 77.5 per cent respondents agreed with the statement that

Technological information provided by CDF is highlyrelevant utility to them, 8.75 per cent found it as very high utility while 2.5 per cent found information of low utility. Regarding information marketing of the produce 76.25 per cent respondent found it was of high utility, 13.75 per cent reported to have found information of very high utility. Same as regarding information on digital services provided by CDF 71.25 per cent respondents reported to have found it of high utility, while 1.25 per cent of the rural women found information of low utility.

Table 6 depicted the mean, standard deviation and coefficient of variation for the responses of the rural women regarding the utility of the information/ services provided by CDF. The mean score for the marketing services was 3.04, followed by technological information/services which signify that this information was highly useful to the rural women beneficiary. The coefficient of variation for information about all the parameters was consistent because of low coefficient of variation among the

Table 5: Distribution of Rural Women Beneficiaries on Effectiveness: Utility of the Information

(n= 80)

S.No.	Services	SA		A		U		D	
		f	%	f	%	f	%	f	%
	Technological Information Provided by CDF is highly useful to your need	7	8.75	62	77.50	9	11.25	2	2.5
	Technological information provided by CDF is suited to both rich and poor	7	8.75	62	77.50	7	8.75	4	5
	Marketing Informationprovided by CDF has helped in getting better price for your product	11	13.75	61	76.25	8	10	0	0
	Digital services provided by CDF have increased competence and self -confidence.	7	8.75	57	71.25	15	18.75	1	1.25

SA=Strongly Agree, A=Agree, U=Undecided, D= Disagree

Table 6: Descriptive Statistics Regarding Beneficiaries Utility of the Information Provided by CDF

(n=80)

Statistics	Technological services/ Inf. Provided by CDF is highly useful to your need	Technological services/ Inf. provided by CDF is suited to both rich and poor	Marketing Services/Inf. provided by CDF has increased price of your produce	Digital services provided by CDF have increased competence and self-confidence.
Mean	2.93	2.90	3.04	2.88
S.D.	0.55	0.61	0.49	0.56
C. V (%)	18.67	20.96	16.10	19.47

various mentioned parameter.

Satisfaction of rural women

It referred to the degree to which information was able to meet the information need of the users. The rural women satisfaction was operationally defined as the perceived need satisfaction with the use of services provided by CDF. It was measured by using schedule and the scoring pattern used was as follows:

Table 7 represents the satisfaction of the rural women beneficiaries toward information/services provided by the Connecting Dream Foundation (CDF). It revealed that 81.25 per cent rural women agreed that the technological information provided by CDF is cost effective. Approximately seventy seven per cent (76.25%) were found satisfied with the advisory services provided by CDF and ten per cent respondents were highly satisfied with advisory services, which were specific to their needs. A large majority 82.50 per cent of the respondents was found satisfied with the services which were helpful in increasing income/confidence directly or indirectly.

Table 8 depicted the mean, standard deviation and coefficient of variation for the responses of the respondents regarding the satisfaction with technology/services provided CDF. The mean score for satisfaction with cost effectiveness of technology provided by CDF was 2.90, followed by the satisfaction from need based advisory services provided by CDF (2.91) followed by satisfaction from services which were helpful in increasing income (2.96), which signified that most of respondents were satisfied with the services. The coefficient of variation for field personnel are fair and do not show any favour to particular individual was high (23.20%) which signified that the data were relatively inconsistent among the respondents. But the other parameters were consistent because of low coefficient of variation.

Ease of Understanding of Information

The ease of understanding was operationally defined as the degree to which the message conveyed by Connecting Dream Foundation (CDF) is clear and understandable by respondents. The data obtained is presented in the following table.

Table 7: Distribution of Rural Women Beneficiaries on Effectiveness: Satisfaction level of the services

(n=80)

Sl.No.	Services	Highly satisfied		Satisfied		Dissatisfied		Highly dissatisfied	
		f	%	f	%	f	%	f	%
	Cost effectiveness of Technological information provided by CDF	6.25	65	81.25	7	8.75	3	3.75	
	Need based Advisory services	8	10.00	61	76.25	7	8.75	4	5.00
	Services provided by CDF is helpful to increase income/confidence	7	8.75	66	82.50	4	5.00	3	3.75
	Fairness of field personnel	12	15.00	55	68.75	9	11.5	4	5.00

Table 8: Descriptive Statistics Regarding Satisfaction with Information/Services Provided by CDF

(n=80)

Services	Cost effectiveness Technological information provided by CDF	Need based Advisory services	Services provided by CDF is helpful to increase income	Fairness of field personnel
Mean	2.90	2.91	2.96	2.94
S.D.	0.54	0.62	0.54	0.68
C. V (%)	18.69	21.29	18.17	23.20

Table 9 represented the response of the beneficiary rural women to the ease of understanding information provided by the Connecting Dream Foundation. The data regarding language of Voice message, showed that 63.75 per cent respondents found it somewhat easy and 10 per cent found it very easy to understand. Regarding technical term used in text/voice message it was found that 77.50 per cent respondent perceived it somewhat easy to understand, followed by 22.50 % who found it easy. Nearly two third of the respondents (73.75%) found information regarding health/marketing/govt. schemes somewhat easy to understand and 15 per cent found it very easy to understand.

Table 10 depicted the mean, standard deviation and coefficient of variation for the responses of the beneficiary rural women regarding the ease of understanding of information provided by CDF. The mean score for the information regarding health/marketing/govt. schemes was 2.99, which signified that most of rural women beneficiaries found it very easy to understand, followed by content of the information provided by CDF (2.80). The coefficient of variation for ease of understanding language of voice message was high (25.63), which signified that

data were relatively inconsistent among the rural women followed by information regarding health/marketing/govt. schemes with CV (21.63). But the other parameters were consistent because of low coefficient of variation.

CONCLUSION

The Connecting Dream Foundation has been playing a vital role in availing different information and services need of the farmers. They provides timely information which helps in solving many problems of the rural women. The Apnatech tree model of Connecting Dream Foundation (CDF) is quite efficient in delivering advisory services, financial services, market support services and digital literacy related services. Due to intervention of Connecting Dream Foundation in both the district of Uttar Pradesh has changed the perception about rural women and women become more economically active and independent. Information and training support of rural women by Connecting Dream Foundation (CDF) resulted into high increase in informational empowerment of rural women simultaneously increased in their income as well. This led to a very high level of satisfaction among rural women about the services of connecting Dream

Table 9: Distribution of Rural Women Beneficiaries on Effectiveness: Ease of Understanding of the Information (n=80)

S.No.	Statements	Very easy to understand		Somewhat easy		Easy		Not easy at all	
		f	%	f	%	f	%	f	%
	Language of voice messages	8	10.00	51	63.75	16	20.00	5	6.25
	Technical term used in text/voice	0	0.00	62	77.50	18	22.50	0	0.00
	Content of information	1	1.25	62	77.50	17	21.25	0	0.00
	Information sequencing	12	15.00	59	73.75	5	6.25	4	5.00

Table 10: Descriptive Statistics of ease of understanding of the information provided by CDF

Statistics	Language of voice message	Technical term used in text/voice message	Content of information	Information regarding health/marketing/govt. schemes
Mean	2.78	2.78	2.80	2.99
S.D.	0.71	0.42	0.43	0.65
C. V (%)	25.63	15.14	15.46	21.63

Foundation. The effectiveness of the services provided by Connecting Dream Foundation can be further enhanced through incorporating stakeholders into programme designing and encouraging more inclusive partnership of the all stakeholders, particularly rural women.

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REFERENCES

Afroj and Singh, (2013). Effectiveness of participatory video in dissemination of farm technology: A case of Digital Green. M.Sc. Thesis, Division of Agricultural Extension, IARI, New Delhi-12.

Hanumankar (2005). Effectiveness of Kissan Call

Center for Agricultural Information Delivery edited book by Sarvanan C and Indira Devi T, New Delhi Publishing Agency, New Delhi. P 143-150.

Meera, S.N., Jhamtani, A. and Rao, D.U.M. (2004). Information and Communication Technology in Agricultural Development : A comparative analysis of three projects from India. AgREN Network Paper No.135,ODI, January 2004.30p.

Singh and Burman (2015). Effectiveness of mobile based agro-advisory Services in addressing Information Need of the Stakeholders: A Case of Connecting Dream Foundation. *Indian journal of Extension Education*

Huyer, S. and Sikoska, T. (2003), Overcoming the gender digital divide: understanding ICTs and their potential for the empowerment of women, INSTRAW Research, Paper Series No.1.