Assessment of Kisan Mobile Advisory (KMA) Service for Dissemination of Agricultural Information

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Abstract

The present study was undertaken on 350 farmers, 100 in-service personnel and 50 input dealers out of the total 3330 users registered with KVK Amritsar. After sending the messages for three years (2012, 2013 and 2014) responses from the selected KMA beneficiaries were obtained during March 2015 through telephone by calling them on their respective mobile numbers. Messages were needful and timely as reported by 80.86 per cent of farmers and 82 and 68 per cent of extension personnel and input dealers respectively. The delivered messages were medium understandable for 47.14 per cent of farmers, highly understandable for 85 per cent of extension personnel and for 66 per cent of the input dealers. The messages were fully applicable as perceived by 75.71 per cent of farmers, while 22 per cent of the farmers perceived as medium applicable and 02 per cent reported as partially applicable. It was also found that 87 per cent messages were fully applicable for extension personnel and 74 per cent for input dealers. The overall high impact of KMA services was reported by 80.86 per cent farmers, 87 per cent of extension personnel and 74 per cent of input dealers. Low impact of two per cent each was reported by all the respondents viz., farmers, extension personnel and input dealers in Amritsar district of Punjab.

Agriculture is a major source of income and employment in India and improving production is an important component to eliminate poverty. Majority of India's population live in rural areas; so development in the rural areas especially in the agriculture sector is important for the Indian economy. Mobile phone service has the potential to increase resilience and reduce cost of communication and information retrieval. It empowers poor farmers with access to information and communication by way of providing technology related to new crops, improved breeds of animals and changing agricultural practices etc. The technology in turn has influenced the society, development and social environment (Manoj, 2006). In this age of information revolution, information technologies are being used in almost all walks of life. Today computer, Internet and mobile are turning out

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to be extremely important. Information and Communication Technologies (ICTs) are facilitating faster sharing of information and innovations and acting as a key agent for changing the agrarian situation and farmers' lives by improving access to agricultural information. (Parganiha *et al,* 2012). Reports indicate that 45 per cent of the world's ICT projects are implemented in India. Asia's highest number of information kiosks are implemented across rural India (Chattopadhyay, 2004). In addition, Government of India's policy has proposed a knowledge centre in every village by 2007 (Swaminathan, 2005). However, most of the ICT projects are implemented in the socio-economically developed states of India. A series of broadcasts on a particular topic through the Krishi Community Radio Station has significantly increased the knowledge of the listeners on need-based aspects of agriculture. (Nithya Shree *et al*, 2013).

The Kisan Mobile Advisory services through messages is being used to deliver the needful agricultural information and especially to improve farmers' agricultural technical knowledge with decision making ability, so that, they may be able to increase their production and productivity to fulfill market demands and secure higher income and better quality of life in the present competitive agrarian economy. The advisory was sent to targeted farmers covering information relating to, crop production, livestock management, weather forecast, marketing, general awareness and other enterprises etc.

Kisan Mobile Sandesh (KMS) or Kisan Mobile Advisory Services (KMAS) is one among several methods of ICTs working successfully for dissemination of the latest information. KMAS is based on the liner model of communication, which involves four major components of the communication process *viz.* Sender, Message, Channel and Receiver. Mobile phones, Short Message Service (SMS) are important tools and can be used by the KVK specialist. The extension functionary is the user of the information while farmers are implementers at the field level.

Methodology

The present study was conducted in Amritsar District of Punjab in the year 2015. The majority of the farmers in the study come under small and marginal groups. The land holding may have a bearing on the usefulness of the SMS. The Kisan Mobile Advisory Service was launched for sending information through Short Message Service (SMS) in Amritsar District by the KVK during 2012. Through bulk message service, messages were sent related to agricultural aspects like crop

production, livestock management, weather, marketing and other enterprises, on their registered mobiles. For collecting information, a semi structured interview schedule was designed on the basis of available literature. Out of the total 3330 users registered with KVK Amritsar, 350 farmers, 100 in-service personnel and 50 input dealers were selected randomly for collection of data. After sending the messages for three years (2012, 2013 and 2014), responses from the selected KMA beneficiaries were obtained during March 2015 through telephone by calling them on their respective mobile numbers.

In order to assess the overall impact of the technology responses of the respondents were recorded on a four point continuum scale for each aspect and assigned scores like;

a) Need and time based information
   (Needful & timely-3, Not needful & timely -2, Needful & not timely -1, Not needful & not timely-0)

b) Understanding of the message
   (High-3, Medium-2, Low-1, Not-0), and

c) Applicability of message
   (Fully-3, Medium-2, Partially -1, Not-0)

   Finally an index was worked out to assess the overall impact of the technology with the help of the following equations:

$TI = O/S \times 100$

Where,

TI = Technology impact index of respondents

O = Total scores obtained by respondents

S = Total obtainable score

Results and Discussion

Impact of Kisan Mobile Advisory services on transfer of agricultural technology was assessed and is discussed as under.

1. Need and Time based information

The data presented in Table 1 indicates that advisory through message was Needful & Timely for 80.86 per cent of the KMA received by the farmers and 82.00 and 68.00 per cent for extension personnel and input dealers respectively.

Less numbers of farmers (1.43%), extension personnel (4.00%) and input dealers (4.00%) reported that the message was Needful & not Timely for them. None of the respondents reported that the advisory was Not Needful and not Timely.

Table 1. Distribution of the respondents according to need and time based information

Category	Farmers (N = 350)		Extension Personnel (N = 100)		Input dealers (N = 50)	
	No.	Percentage	No.	Percentage	No.	Percentage
Needful & Timely	283	80.86	82	82	34	68.00
Not needful & timely	62	17.71	14	14	14	28.00
Needful & not timely	05	1.43	04	4.00	02	4.00
Not needful & not timely	00	00	00	00	00	00
Total	**350**	**100**	**100**	**100**	**50**	**100**

2. Understanding of the Message

The results of Table 2 reveal that the sent advisory messages were medium understandable for 47.14 per cent of the farmers, and highly understandable for 85.00 and 66 per cent of extension personnel and input dealers respectively. Two per cent of the farmers reported that the message was not understandable for them.

Table 2. Distribution of the respondents according to understanding of the message

Category	Farmers (N = 350)		Extension Personnel (N = 100)		Input dealers (N = 50)	
	No.	Percentage	No.	Percentage	No.	Percentage
Highly understandable	154	44.00	85	85.00	33	66.00
Medium understandable	165	47.14	13	13.00	15	30.00
Low understandable	24	6.86	02	2.00	02	4.00
Not understandable	07	2.00	00	00	00	00
Total	**350**	**100**	**100**	**100**	**50**	**100**

3. Applicability of Message

Table 3 reveals that advisory messages were fully applicable for about 75.71 per cent of the farmers, 87 per cent of extension personnel and for 74.00 per cent of input dealers. They were medium applicable for 22, 11 and 24 per cent of farmers, extension personnel and input dealers respectively. Messages were reported to be partially applicable for two per cent each of farmers, extension personnel as well

as for input dealers. It was also found that messages were not applicable for 0.29 per cent of farmers only.

Table 3. Distribution of the respondents according to applicability of the message

Category	Farmers (N=350)		Extension Personnel (N=100)		Input dealers (N=50)	
	No.	Percentage	No.	Percentage	No.	Percentage
Fully applicable	265	75.71	87	87.00	37	74.00
Medium applicable	77	22.00	11	11.00	12	24.00
Partially applicable	07	2.00	02	2.00	01	2.00
Not applicable	01	0.29	00	00	00	00
Total	**350**	**100**	**100**	**100**	**50**	**100**

4. Overall impact of Technology

Table 4 indicates the overall impact of technology and it is found that technology had high impact on 80.86 per cent of farmers, 87 per cent of extension personnel and 74 per cent of input dealers. Low impact of two per cent each was reported by all the respondents viz: farmers, extension personnel and input dealers respectively. The results of this study are also supported by Parganiha *et al* (2012).

Table 4: Distribution of the respondents according to overall Impact of Technology

Category	Farmers (N=350)		Extension Personnel (N=100)		Input dealers (N=50)	
	No.	Percentage	No.	Percentage	No.	Percentage
Low (< 4)	07	2.00	02	2.00	01	2.00
Medium (score 4-7)	60	17.14	11	11.00	12	24.00
High (> 7)	283	80.86	87	87.00	37	74.00
Total	**350**	**100**	**100**	**100**	**50**	**100**

Conclusion

Innovative and improved communication is a vital requirement for sustainable agricultural development in the present scenario, hence cyber technologies like mobile, Internet and success stories based films must be used in the information communication system to motivate the farmers. Kisan Mobile Advisory is proving as an important tool for dissemination of agricultural technologies, innovations and information up to the farmers level in this crucial time of urgent need without any hindrances which is the need of the hour. KMA was found to be a novel step to transform the present agricultural information communication system at the grass root level to provide quick access to information.

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