

Utilization Pattern of SMS Messages sent by Krishi Vignana Kendras

D. A. NITHYA SHREE, GOURI YELVATTIMATH AND UMA S. HIREMATH

AICRP, Home Science Extension, UAS, Dharwad - 580005

ABSTRACT

The Krishi Vignana Kendras (KVK) under the administrative control of University of Agricultural Sciences, Dharwad have started Information Technology enabled service aiding instant messaging to individual farmers for extending Agricultural information through SMS (Short Message Services) alerts in the year 2010. The service comprises sending SMS alerts on cellular phone numbers registered by KVK of individual farmers. In order to know the utilization pattern of these messages the present study was conducted during the year 2013-14 in the areas covered under KVK Dharwad and KVK, Hanumanamatti. The sample consisted of 150 randomly selected receivers of SMS alerts from each of the KVK's considering the list of registered farmers. Thus, the total sample constituted 300 farmers. The information was collected from the sample with the help of a structured schedule through telephonic interview. The results indicated that majority of the message receivers were having high level of education, income, social and extension participation. Among the message receivers, 52.00 per cent were reading / listening to the message regularly, 64.34 per cent read messages during free time, 60.00 per cent could understand the message completely, 49.32 per cent never discussed after reading the message, 52.00 per cent always implemented the message and 48.33 per cent read the message twice. Overall utilization pattern was found to be high among 41.67 per cent, low among 30.00 per cent and medium among 28.34 per cent. Overall utilization pattern had positive and significant relationship with education, mass media participation and extension participation. Hence, this SMS alerts can be used as one of the extension methods for giving tips and timely agricultural and allied information to the farmers.

KRISHI Vigyana Kendra (KVK) is a grass root level institution designed and devoted to impart need-based and skill-oriented vocational training to the practicing farmers, in-service extension personnel and to those who wish to go in for self-employment through "learning by doing". In the year 2010, new technology was adopted by KVKs, i.e., spreading of technology or information through SMS (Short Message Service). The KVK has opened for the first time the Information Technology enabled service aiding instant messaging from KVK to individual farmers for extending agricultural information through SMS alerts. The service comprises of sending Short Message Service alerts on cellular phones registered at KVK by individual farmers. SMS alerts are issued on various agricultural developments like crop cultivation practices, disease / pest forecast and control, weather based agro met forecast, health and nutrition for women and children, market information etc. The service is also being used as a medium to send information on important trainings and other programmes to the members of the registered farmers clubs and Self Help Groups network which comes under the KVK .

The service is an important milestone in reaching out to thousands of farmers at a stroke of a mouse click and enables the farmer to have information access and fruitfully use technological prowess and face the challenges of upcoming problems in the field. The service is a boon for hundreds and thousands of farmers. All registered farmers who are having cellular mobile handsets supporting all major GSM / CDMA networks are receiving the SMSs from KVK without any cost. The KVK bears all the costs of sending the SMS across all the registered farmers having cell phones.

The scientist can send SMS and voice messages to the registered farmers. These messages are classified according to crops and agro climatic zones. The farmers get alerts and advisory messages based on their personal information provided to the KVK. The advent of mobile telephony has abridged the gap between the rural communities and extension agencies by providing timely agricultural information. The five KVKs coming under the jurisdiction of University of

Agricultural Sciences, Dharwad have also started this service since 2010.

In order to know the utilization pattern of these messages, the present study was undertaken with the following specific objectives

1. To analyze the utilization pattern of the KVK messages by the receivers.

2. To study the relationship between utilization pattern and socio-personal characteristics of the receivers.

METHODOLOGY

The present study was conducted during the year 2013 - 2014 in the area covered under KVK, Dharwad and KVK, Hanumanamatti. The sample consisted of 150 randomly selected receivers of SMS alerts from each of the two KVK's considering the list of registered farmers. Thus, the total sample constituted 300 farmers. The information was collected from the sample with the help of a structured schedule through telephonic interview.

Utilization pattern was measured considering the six aspects of utilization *viz.*, regularity of reading / listening of messages, pattern of reading, content of messages, understanding text messages, discussion after reading message, implementation of message and number of times messages are read. Suitable scoring pattern was followed to analyze the utilization pattern of the KVK messages by the receivers. The respondents were categorized into low, medium and high in case of overall utilization pattern based on mean and standard deviation.

Suitable scales were followed to measure the socio-personal characteristics of the respondents. The collected data was scored, tabulated and analyzed using frequency, percentage, and student 't' test.

RESULTS AND DISCUSSION

Socio-personal characteristics of KVK message receivers : Table I presents the data on the socio-personal characteristics of the respondents. Majority (57.66 %) of the respondents belonged to

TABLE I
Socio-personal characteristics of KVK message receivers
(n = 300)

Socio Personal Characteristics	Categories	Message Receivers	
		Frequency	Percentage
Age	Young	98	32.66
	Middle	173	57.66
	Old	29	09.68
Education	Illiterate	39	13.00
	Primary school	9	03.00
	Middle school	34	11.34
	High school	98	32.66
	PUC and above	120	40.00
Marital status	Married	248	82.66
	Unmarried	52	17.34
Family Occupation	Farming	233	77.66
	Farming + Labour	31	10.34
	Farming + Subsidiary	13	04.34
	Job	23	07.66
Income	Low income	70	23.33
	Semi medium income	68	22.67
	Medium income	94	31.33
	High income	68	22.67
Type of family	Nuclear family	120	40.00
	Joint family	180	60.00
Social participation	Low	00	00
	Medium	222	74.00
	High	78	26.00
Mass Media participation	Low	182	60.66
	Medium	41	13.67
	High	77	25.67
Extension participation	Low	17	5.66
	Medium	183	61.00
	High	100	33.34

middle age group, 32.66 per cent were young and only 9.68 per cent were old farmers. In case of education 40.00 per cent of the respondents had college education, 32.66 per cent had high school education, 11.34 per cent had middle school education, three per cent had primary education and 13.00 per cent were illiterates. Among the respondents, 82.66 per cent were married and 17.34 per cent were unmarried. In case of family occupation, majority (77.66 %) of the respondents had farming as their main occupation, 10.34 per cent were working as labourers along with farming, 4.34 per cent had farming along with subsidiary occupation and 7.67 per cent were in other jobs. With regard to income, 31.33 per cent belonged to medium income group and the remaining respondents were almost equally distributed in other groups with 23.33 per cent in low income, 22.67 per cent each in high income and semi medium income group. Majority (60.00 %) of the respondents had joint families and 40.00 per cent were having nuclear families.

In case of social participation, majority (74.00 %) had medium level participation and 26.00 per cent of the respondents had high participation. With regard to mass media participation, 60.66 per cent had low, 25.67 per cent had high and 13.67 per cent of the respondents had medium level of participation. Majority (61.00 %) of the respondents had medium level of extension participation followed by 33.34 per cent with high and 5.66 per cent had low level of participation.

Thus, we can infer from the table that majority of the message receivers were middle aged, PUC and above education, married, having farming as their family occupation with medium to high income level, staying in joint families, having medium to high social and extension participation, but, having low level of mass media participation. This indicates that people with high education, income, medium level of social and extension participation have registered with KVKs for getting timely agricultural information through SMSs.

Utilization pattern of Short Messages Services : The results in Table II shows the various aspects of the utilization pattern of messages. It clearly shows that in case of regularity of reading / listening of messages 52.00 per cent of the receivers read the

TABLE II
Utilization pattern of Short Messages Services
(n = 300)

Aspects of Utilization Pattern	Categories	Message receivers	
		Freq- uency	Per centage
Regularity of reading the messages			
	Regularly	156	52.00
	Occasionally	115	38.34
	Never	29	09.66
Pattern of reading messages			
	Immediate	81	27.00
	While work	26	08.66
	Free time	193	64.34
Understand text messages			
	Understand Completely	180	60.00
	Understand Partially	100	33.34
	Do not understand	20	06.66
Discussion after reading message			
	Always	34	11.34
	Sometime	118	39.34
	Never	148	49.32
Implementation of messages			
	Always	156	52.00
	Sometimes	115	38.34
	Never	29	09.66
Number of times messages are read			
	More than twice	13	04.34
	Twice	145	48.33
	Once	142	47.33

messages regularly, whereas 38.34 per cent read occasionally and only 9.66 per cent never read the messages. This indicates that more than 90.00 per cent of the receivers read the messages either occasionally or regularly

With regard to pattern of reading messages, majority (64.34 %) read the messages during their free time, while, 27.00 per cent read immediately when they receive the message and the remaining 8.66 per cent read while working. The reason may be most of the

farmers do not carry their mobiles while working on the field and hence go through the messages during free time.

Majority (60.00 %) of the receivers felt that messages were clear and could be understood, while 33.34 per cent said that they could understand the message partially, but, 6.66 per cent could not understand the message. The reason behind this is literacy level of the receivers. Eventhough, 13.00 per cent are illiterates, they get the messages read by others and try to understand as the messages are sent in simple language.

In case of discussion after reading messages, 49.32 per cent of the respondents never discussed, 39.34 per cent sometimes discussed after reading messages and 11.34 per cent always discussed about the message after reading it. The reason may be majority of the receivers clearly understood the message and hence did not discuss much about it. Even after understanding message the receivers discuss about the messages to decide about the action to be taken.

With respect to implementing the message, 52.00 per cent of the receivers implement the message after reading it, 38.34 per cent sometimes implement, whereas 9.66 per cent do not implement the messages. As the messages sent are timely and useful with regard to agricultural and allied activities, majority of them have implemented it. In any social system there will be certain per cent of late adopters and laggards, hence such people have not implemented it.

The result also revealed that 48.33 per cent of the respondents read the messages twice, while, 47.33 per cent read once and only 4.34 per cent read the messages more than twice. The variation in the number of times reading the message may be due to the difference in capacity of the respondents in understanding the messages. But as receivers feel that the messages are clear and easily understandable, 47.33 per cent of the respondents have read the messages only once.

Overall utilization pattern of KVK messages : Table III reveals that 41.67 per cent of the respondents had high, 30.00 per cent had low and 28.33 per cent

TABLE III

Overall utilization pattern of KVK messages

(n = 300)

Categories	Frequency	Percentage
Low	90	30.00
Medium	85	28.33
High	125	41.67

Mean = 7.42; Standard deviation = 0.425

had medium level of overall utilization pattern of KVK messages. Majority of the receivers read the messages regularly and could able to understand the messages clearly. They not only understood the message but further discussed about it and implemented the messages. As majority of the respondents are making use of the messages hence their overall utilization pattern is also high.

Relationship between socio personal characteristics and overall utilization pattern : Table IV shows that overall utilization pattern had

TABLE IV

Relationship between socio personal characteristics and overall utilization pattern

(n = 300)

Socio Personal Characteristics	Overall Utilization Pattern
Age	0.06 NS
Education	0.22 **
Occupation	0.01 NS
Annual income	-0.06 NS
Family type	0.03 NS
Marital status	0.07 NS
Mass media participation	0.13 *
Extension participation	0.12 *
Social participation	0.02 NS

** Significant at 1 % level

* Significant overall at 5 % level

NS=Non-significant

positive and significant relationship with education at one per cent level of probability, whereas, mass media participation and extension participation had positive and significant relationship with the overall utilization pattern at five per cent level of probability. Age, occupation, annual income, family type, marital status and social participation had no significant relationship with the overall utilization pattern. It can be inferred that as education, mass media participation and extension participation increases, there will be increase in the overall utilization pattern.

The study indicates that the majority of the respondents are in medium to high levels of overall utilization pattern of KVK messages which means the respondents are reading the messages and also implementing it. At present, majority of the population in rural India also possess mobiles. Hence, the SMS alerts can be used as one of the extension methods to give tips and timely agricultural information to the

farmers. Tips and timely information given to the farmers through messages may in turn help in taking immediate action during emergencies and also increasing the adoption of improved agricultural practices. Thus, providing timely agricultural information can go a long way in increasing agricultural production of the country.

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