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A Study on effectiveness of mKisan portal in providing Agricultural information in Telangana State

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ABSTRACT: The growing popularity, access, use of mobile phone technology and it's penetration in all the sectors of the population in India give a unique opportunity in ICT mediated extension for development of mobile phone based agro-advisory systems. There is evidence of high use of mobile phones by seeing the TRAI reports. As the mKisan portal was providing advisories through SMS messaging which does not require any internet connection or a smartphone which include major reasons for effective utilization of mKisan services by small and marginal farmers. Ex-post facto research design was followed for the study. The state of Telangana was chosen for the studywith a sample size of 120 respondents. To study the effectiveness of mKisan portal in providing Agricultural information Index was developed for the study by selecting six indicators. The results shown that more than half of the respondents perceived that mKisan portal was effective in providing agricultural information.

Keywords: Effectiveness, index, indicators.

INTRODUCTION

Today we are living in the era of information. Information means stored knowledge. Information is a human asset that can be exploited which improves human condition. Kemp (1976) said that "indeed, information has been described as the fifth need of man after air, water, food and shelter. When the facts obtained are systematically presented in a given context it is known as information, whereas relevant and objective information gained through experience is knowledge. The radio, mobile phones, television and internet are providing opportunities to connect the people to obtain and disseminate information among people to bring new revolution in agriculture. The increasing penetration of mobile phones and mobile phone enabled information services in rural areas of India can reduce information of asymmetry and complement the role of extension services. The growing popularity, access, use of mobile phone technology and it's penetration in all the sectors of the population in India give a unique opportunity in ICT mediated extension for development of mobile phone based agro-advisory systems. ICT services provide critical access to the knowledge, technology and information which are essentially need by farmers to improve the productivity and thus improve the quality of lives and livelihoods (Nandeesha, 2016). Mobile agro advisory services provide timely and limit information to farmers.

Under the National e-governance plan-Agriculture (NeGP-A) there are various modes of delivery of enabled services have been invested which include internet, touch screen kiosk, agri clinics, private Kisan call centres, mass media, common service centres etc. As per TRAI (Telecom Regulatory Authority of India) reports 2022 the number of telephone subscribers in India increased from 1,166.05 million at the end of February 2022 to 1,166.93 million at the end of March 2022 there by showing a monthly growth of rate of 0.08%. Urban telephone subscription decreased from 647.76 million at the end of February-22 to 647.11 million at the end of March-22 and the rural subscription also increased from 518.29 million to 519.82 million during the same period. The monthly growth rates of urban and rural telephone subscription were -0.10% and 0.30% respectively during the month of March-22. In this modern technological era, ICT based mobile portals are becoming wider sources of information to farmers, mKisan portal is one among them. mKisan portal was started in the year 2013, from its inception no study has done, and noticed that majority of the farmers are registered through mKisan portal for information. Till now 5,1376,458 crore farmers were registered in mKisan portal in India and 24,62,3710,138 messages were sent through mKisan portal. Hence this research topic was selected to find out the effectiveness of mKisan portal in providing agricultural information.

METHODOLOGY

The state of Telanagana was purposively chosen for the study. Southern Telangana Zone was selected. Madanapuram KVK was selected purposively where highest number of farmers were registered in mKisan portal by the KVK. Wanaparthy district was selected purposively in which Madanapuram KVK falls. Three mandals from Wanaparthy district were selected randomly and four villages from each mandal were selected using simple random sampling technique. Thus, a total of twelve villages were selected. From each village 10 respondents were selected using simple random sampling technique thus constituting 120 respondents for the study. And 20 KVK officials were selected randomly from the total officials working in KVKs of Telangana state. To study the effectiveness of mKisan portal in providing Agricultural information Index was developed. In total 13 indicators were identified based on literature and finalized after judges rating having relevancy score more 0.80. Only six indicators were selected, and they were timeliness of the information, quality of information, specificity of information, comprehensiveness of information, ease of understanding of information, applicability of information. Reliability was tested by using Internal consistency reliability method. The Cronbach Alpha coefficient obtained for the index was found to be 0.88, which indicates good internal consistency of items in the index. The different indicators selected for inclusion in the index had different number of items under them and hence their rage was different. Hence, the scores of all six indicators were normalized using the formula given below:

$$U_{ij} = \frac{Y_{ij} - Min_{yj}}{Max_{yj} - Min_{yj}}$$

Where,

U_{ij} = Unit score of the i^{th} respondents on j^{th} component

Y_{ij} = Value of i^{th} respondent on the j^{th} component

Max_{yj} = Maximum score on the j^{th} component

Min_{yj} = Minimum score on the j^{th} component

The score of each component ranged from 0 to 1 i.e. when Y_{ij} is minimum, the score is 0 and when Y_{ij} is maximum, the score is 1.

$$\text{Effectiveness of mKisan portal Index} = \frac{EM_1 + EM_2 + EM_3 + EM_4 + EM_5 + EM_6}{6}$$

Where,

EM_1 = Normalized indicator value of timeliness of messages

EM_2 = Normalized indicator value of applicability

EM_3 = Normalized indicator value of ease of understanding of information

EM_4 = Normalized indicator value of specificity of information

EM_5= Normalized indicator value of comprehensiveness of information

EM_6 = Normalized indicator value of quality of information

The primary data was collected from the farmers registered in mKisan portal and appropriate statistical methods like data classification, frequency, percentages and means used for data analysis.

RESULTS AND DISCUSSION

Data presented in Table 1 shows that nearly half of the farmers (40.80%) perceived messages sent through mKisan portal were timely. Regarding the quality of information majority (57.50%) of the farmers perceived messages sent through mKisan portal was good. The findings are in coincidence with Singh (2014). Applicability of information perceived by majority of farmers (69.2%) as applicable. Regarding the comprehensiveness of information majority (56.70%) of the farmers perceived messages sent through mKisan portal were having low comprehensiveness. Regarding the Specificity of the information majority (65.00%) of the farmers perceived messages sent through mKisan portal were medium specific. Regarding the ease of understanding of information nearly half of the farmers (46.70%) perceived messages sent through mKisan portal were in medium level which indicate understandable.

Table 1: Farmers were grouped in to following three categories by using class interval method.

Sr. No.	Indicators	Category	Class Interval	Percentage
1.	Timeliness of messages	Untimely	18-22	20.0
		Timely	22-26	40.8
		Pretimed	26-30	39.2
2.	Applicability	Less applicable	5-7	5.8
		Applicable	7-9	69.2
		Highly applicable	9-11	25.0
3.	Ease of understanding of information	Low	9-11	12.5
		Medium	11-13	46.7
		High	13-15	40.8
4.	Specificity of information	Low	10-12	16.7
		Medium	12-14	65.0
		High	14-16	18.3
5.	Comprehensiveness of information	Low	6-8	56.7
		Medium	8-10	38.3
		High	10-12	5.0
6.	Quality of information	Poor	27-33	30.0
		Good	33-39	57.5
		Excellent	39-45	12.5

Overall effectiveness of mKisan portal in providing Agricultural information. Data presented in Table 2 shows that nearly half of the farmers perceived overall effectiveness of mKisan portal in providing agricultural information was effective *i.e.* 49.2 per cent followed by 28.3 per cent farmers perceived it was highly effective and 22.5 per cent farmers perceived it was less effective in providing information. The findings are in coincidence with Singh (2018). The probable reason for 49.2 per cent of the farmers perceived effectiveness of mKisan portal was effective because the usefulness of the advisories provided by portal through expert suggestions. Another reason may be that the messages provided by mKisan portal were in local language thus farmers with less education status can also utilize the services. Due to least number of technical words used by experts made it effective. As the usage through this portal was economical and affordable when compared to other mobile agro-advisory services majority of the people were using it. The farmers were very much satisfied with the advisories provided by mKisan portal. The reason for 22.5 per cent of the farmers perceived it as less effective because of low comprehensiveness of information provided through mKisan portal.

Table 2: Distribution of farmers on basis of overall effectiveness of mKisan portal (n=120).

Sr. No.	Category	Frequency	Percentage
1	Less effective (0.08-0.34)	27	22.5
2	Effective (0.34-0.61)	59	49.2
3	Highly effective (0.61-0.88)	34	28.3
	Total	120	100

CONCLUSION

From the above results it can be concluded that farmers perceived the information provided through mKisan portal was effective and useful to them in practicing Agriculture. It helping them to adopt new technologies and best agricultural practices. The content of messages should be provided based on farmer's needs and local availability. The information was timely on agricultural practices. As there was low comprehensiveness of information provided through messages, the farmers suggested that there should be more information regarding market prices, farm mechanization, biofertilizers, organic farming practices, drying and storage activities. Provide information on available inputs in local markets. Create awareness on importance of mKisan portal through KVKs, FPOs to the farmers.

FUTURE SCOPE

1. The investigation was carried out in a specific area with restricted sample of 120 farmers. Therefore, similar studies may be conducted with large samples covering all the states and districts.
2. Comparative study between mKisan portal and other mobile applications can be studied to identify existing lacunae in implementation of these programmes.
3. The present study considered only a few selected profile characteristics of the registered farmers to find their relationship with dependent variables. The number of other variables suited for the study that are likely to affect the dependent variables may be studied.
4. An exclusive study is needed on content analysis of mKisan portal for better designing and delivering of Agricultural information to the farmers.

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