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Research Article

Accessibility of information and communication technologies (ICTs) to the farmers of north Karnataka

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SUMMARY : A study was conducted in Belgaum district of Karnataka to assess the accessibility of ICTs to the farmers and constraints in utilizing them. The study also tried to get some suggestions from farmers for making ICTs more effective. Among the various ICT projects in operation, four projects namely, Kisan Call Centre (KCC), Krishi MarataVahini web portal, Raith Mitra Kendra Kiosks and e-Choupal were functional in the study area. A sample of 140 respondents was selected randomly and was personally interviewed using pretested schedule. It revealed that 79.29 per cent farmers owned mobile phone, 12.86 per cent of farmer owned computers and only 5.71 per cent had Internet connection. For majority of farmers (54.29%) nearest internet centre was more than five kilometres away and for only 18.57 per cent farmers internet centre was within kilometre. It was also observed that 26.43 per cent of farmers were taking help of internet facilitator, and only 12.86 per cent retrieve information on their own. The lack of adequate skills in operating ICT tools among farmers (73.57%) and the lack of proper infrastructure (61.43 %) were observed as major constraints in utilisation of ICTs. Majority of the farmers (74.29%) suggested that they need training to improve their skills in operating ICT equipment.

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KEY WORDS:
Accessibility, ICT, KCC, e-Choupal, Raith Mitra Kendra, Krishi Marata Vahini

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BACKGROUND AND OBJECTIVES

Information and communication technologies (ICTs) are acting as key agents for improving agrarian situation by increasing information access to farmers about new agriculture practices. ICTs are now considered as one of the important determining factor for the development of the country and became a key component in twelfth five year plan which was currently operational. In recent times, there are many ICT initiatives by government, non-government and private organisations in the field of agriculture.

ICT projects like Kisan Call Centre initiated by Government of India, Raita Mitra Kendras of Karnataka State Department of Agriculture, Krishi Marata Vahini web portal developed by Karnataka Agricultural Marketing Board and e-Choupals, a private initiative of ITC Limited, are delivering information to the grass root level and are widely popular in Karnataka. These ICT projects are providing information to farmers related to crop management, weather forecasting, market prices, organic farming and other latest technologies in local language and at farmers' convenience. For the efficient functioning of these projects, as a matter of fact any ICT project, the underlying infrastructure in rural areas and its pattern of utilisation should be analysed.

RESOURCES AND METHODS

This study was conducted in Belgaum district of Karnataka to assess the current ICT

infrastructure present in the rural areas, to know the constraints in utilizing them effectively and to get some suggestions from farmers for their improvement. The study was exploratory in nature. A total of one hundred and forty farmers were selected from ten villages randomly, which form sample for the study. A well structured questionnaire was prepared after consulting some farmers and professionals and data were collected through personal interview.

OBSERVATIONS AND ANALYSIS

The results of the present study as well as relevant discussions have been presented under following sub heads:

Accessibility of ICTs:

The data in the Table 1 revealed that 79.29 per cent farmers owned mobile phone and this explains that mobile phones had highly penetrated into the rural life, which make them effective tool for agricultural information dissemination. It also shows that only 12.86 per cent of farmer owned computers, mostly for the education of their children and only 5.71 per cent had internet connectivity in rural areas owing to the problems in infrastructure and lack of perceived usefulness.

For most of farmers (35.00%) nearest internet centre was more than five to ten kilometres away, for 27.14 per cent of farmers it was one to five kilometres away, for 19.29 per cent it was more than ten kilometres away and for only 18.57 per cent of farmers internet centre was within a kilometre distance. It revealed that 39.29 per cent of farmers can access internet services in 30 to 60 minutes and 25.71 per cent take more than 60 minutes to access internet services using their most common mode of transport.

Table 1: Telephone/ Internet accessibility **(n = 140)**

Sr.No.	Category	Frequency	Percentage
A.	**Ownership**		
1.	Telephone (Land line)	10	07.15
2.	Mobile phone	111	79.29
3.	Computer	18	12.86
4.	Internet	8	05.71
5.	None	29	20.71
B.	**Distance**		
1.	< 1KM	26	18.57
2.	1 to 5 KM	38	27.14
3..	5 to 10KM	49	35.00
4.	>10 KM	27	19.29
C.	**Time taken**		
1.	< 15 Min.	15	10.71
2.	15 to 30 Min.	34	24.29
3.	30 to 60 Min.	55	39.29
4.	>60 Min.	36	25.71
D.	**Method of access**		
1.	Retrieves information on their own	18	12.86
2.	Take help of internet facilitator	37	26.43
3.	Take help of any literate youth	30	21.43
4.	Not using internet services	55	39.29

Whereas, only 24.29 per cent can access it in 15 to 30 minutes and 10.71 per cent can access it in less than 15 minutes. This explains that penetration of internet services were very less in rural areas and farmers have to go long distance to avail ICT services.

It is revealed that 60.31 per cent farmers were utilizing internet services among which 26.13 per cent of farmers were taking help of internet facilitator, 21.43 per cent were taking help of any literate youth to use ICT services, only 12.86 per cent retrieved information on their own and 39.29 per cent were not using internet services. Lack of required skills for use of ICTs among the farmers and also non-availability of local specific content were identified as the factors for this pattern behaviour.

Constraints faced by farmers in utilizing ICTs:

The data in Table 2 show that lack of adequate skills in operating ICT tools among farmers (73.57%) was the first major constraint in utilisation of ICTs as these modern ICT tools are complex to operate in which farmers are not well acquainted, followed by lack of proper infrastructure (61.43 %), because of the poor penetration of ICT infrastructure into rural areas, which was also observed by Nagalakshmi and Narayanaswamay (2011). The third major constraint was lack of awareness about different ICT projects and their services (51.43%) as there was lack of advertising strategy followed by these projects. The next major constraint was lack of reliable content online (43.57%) as the most of the websites give blanket recommendations to the farmers and does not provide regional specific information, which was also reported by Dhaka and Chayal (2010). The fifth major constraint was high installation cost of ICTs as most of the farmers (42.14%) think them as sophisticated and expensive equipments.

Suggestions to improve effectiveness of ICTs:

A glance into Table 3 reveals that majority of farmers suggested that they need training for operating ICT equipment (74.29%) as they feel their skills are inadequate to use ICTs which was also observed by Senthilkumar and Mahesh (2009). They also suggested to provide them adequate knowledge of various ICT projects (67.86%) for effectively utilising their services and linking ICT with marketing services (61.43%) which can help them through easy availability of inputs as well as selling of their produce. Connecting farmers with agri-experts through ICTs (57.14%) and channelizing ICTs through farmer groups and organizations (53.57%) were the other suggestions given by farmers to improve the effectiveness of ICT projects.

Conclusion:

Information and communication technologies (ICTs) have a wide scope in providing information services to the farmers for taking better decisions in farm operations. Mobile phones had a greater penetration into rural areas opening opportunities in delivering voice based and text based information services. Computers are less popular owing to its cost and complexity which can be popularised by encouraging educating rural youth for establishing private kiosks. Internet access is very poor in rural areas because of lack of awareness as well as poor infrastructure, which can be improved through public-private partnership. Training programmes should be

Table 2: Constraints in utilisation of ICTs **(n=140)**

Sr. No.	Constraints	Frequency	Percentage
1.	Lack of adequate skill to use ICTs	103	73.57
2.	Lack of proper infrastructure	86	61.43
3.	Lack of awareness about different ICTs	72	51.43
4.	Lack of reliable and useful content online	61	43.57
5.	High cost of ICT tools	38	42.14

Table 3: Suggestions from farmers to improve effectiveness of ICTs **(n=140)**

Sr. No.	Suggestions	Frequency	Percentage
1.	Training should be provided to farmers for operating ICT equipment.	104	74.29
2.	Adequate knowledge of modern ICTs should be provided to farmers.	95	67.86
3.	Linking ICT projects with input supply and crop produce procurement services	86	61.43
4.	Connecting farmers and agri-experts through ICTs.	80	57.14
5.	Channelizing ICTs through farmer groups and organisations.	75	53.57

conducted for making farmers computer literates. It should also be taken care to provide location specific content in local languages online. It will be an effective strategy to build two-way link between farmers groups with agri- experts and marketing services using ICTs.

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