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Perceived impact of ICT enabled extension services on farmers in Erode District

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Abstract
Information delivering systems which are accessible only through the help of ICT tools that are mainly focusing on extension activities are known as ICT enabled extension services. This includes mobile applications, computer applications, Information kiosks, websites, interactive multimedia compact disc and village knowledge centres. The information communication technology (ICT) through some computer and mobile enabled, analogue and digital tools is the key enabler and vital component of new knowledge based economy and information revolution. Based on the above facts the research problem identified is the existence of gap between information rich and information poor farmers. This gap might be filled through the ICT enabled extension services. Hence, the specific objective of the present study is formulated to study the perceived impact of ICT enabled extension services on agriculture and behaviour of farmers. ICT have a demonstrably positive effect on income growth in developing and developed countries. In rural areas, ICTs can raise incomes by increasing agricultural productivity and introducing income channels other than traditional farm jobs and improve income and quality of life among the rural poor. The findings of present investigation will be useful to researchers in the field of ICT and policy makers to formulate effective strategies to reach the unreached through ICT enabled extension services. The present investigation was conducted in Erode district of Tamil Nadu state. A sample size of 120 farmers cultivating banana, paddy, turmeric, sugarcane and coconut were selected through using proportionate random sampling technique. In this study 32 ICT enabled extension services were selected after relevant review of literature, consulting state department official and KVK scientists, getting suggestions and guidance of the experts in the field of ICT. Perceived impact is operationally defined as effectiveness of use of ICT enabled extension services by the individual respondents for different agricultural practices. The impact of various ICT enabled extension services was measured in terms of general and specific. The respondents were asked to give their perceived opinion in terms of agree or disagree. 1 and 0 scores were given accordingly. Percentage analysis was worked out for further interpretation. The findings of the study concluded that ICT enabled extension services has general impact on agriculture such as achieving improved process control and transparency in market information (83.33 per cent) followed by innovations in agriculture through electronic media and support educator and training (76.67 per cent). Most of the respondents stated that the services had specific impact on their behaviour such as increased their knowledge about agricultural inputs and marketing prices (80.00 per cent) followed by new crop varieties and technologies (75.00 per cent). ICT enabled services also increased skill on adoption of innovative technologies (75.00 per cent) and provided information to the respondents about marketing through digital mandi (73.33 per cent) were also reported.

Keywords: Farmers, Agricultural practices and ICT Enabled Extension Services

Introduction
Agriculture is the most important sector with the majority of the rural population in developing countries depending on it. The traditional approaches of agriculture being adopted since long back in the history has numerous challenges. These challenges need attention in order to enhance the production and sustainable development. The challenges of the traditional agriculture are addressed significantly by using ICT that play an important role in uplifting the livelihoods of the rural poor.

In the agriculture sector, the farmers mostly stick on to tradition and traditional method of agriculture. Even though, science has gained importance and developed a lot, since most of the agriculturists are illiterate or some lacking in the awareness of technology and its change, there was not much influence of technology till late 1980's. But now, with the appropriate utilisation of mass media like T.V., mobile phone, radio, computer and internet, the benefits of technology in agriculture are well known to the people.

In such an innovative and revolutionary communication climate, the present research has been conceptualized to assess the Impact of ICT Enabled Extension Services by the farmers in Erode district.

Materials and Methods

The present study was carried out in Erode district of Tamilnadu. The respondents 120 farmers were selected on the basis of registration in KVK for receiving mobile based SMS services. Fifteen independent variables were selected based on judges opinion. Two dependent variables viz., Awareness and Utilisation pattern of ICT enabled extension services were included in this study. The variables were measured by using appropriate scales. Data on impact, problems faced and suggestions to overcome the problems were also elucidated. A pre-tested and well structured interview schedule was used for data collection. The data thus collected were subjected to statistical analysis. The salient findings of the study are given below.

Findings and Discussion

To find out the effectiveness of various ICT enabled extension services on the agriculture sector and to know the extent to which the ICT enabled extension services had influenced on respondents agricultural performance, acquiring of knowledge and access of information data were collected, scores were worked out and presented in Table 1.

Perceived Impact of the ICT enabled extension services

Table 1: Distribution of respondents according to the perceived impact of the ICT enabled extension services

(n=120)

Sl. No	Opinion	Number	Per cent*
General impact on agriculture			
1.	Increased productivity due to growth and penetration of mobile ICTs in rural areas	84	70.00
2.	Innovations in agriculture through electronic media that support education and training	92	76.67
3.	Creation of new opportunities increasing the development of human and social capital	61	50.83
4.	Achieving improved process control and transparency in market information	100	83.33
5.	Reduction of transaction costs in tracking of consumer needs	40	33.33
6.	Enhanced food security and support to rural livelihoods	46	38.33
7.	Poverty alleviation through modern agriculture	26	21.67
8.	Expansion of perspective of local communities in terms of national or global development	37	30.83
9.	Creation of new business opportunities	48	40.00
10.	Increased the adoption of agricultural practices	68	56.67
11.	Increased the income of the respondents and also reduced the pesticide usage	63	52.50
Sl. No	**Opinion**	**Number**	**Per cent***
Specific impact on behaviour			
Increases knowledge about			
1.	New crop varieties and technologies	90	75.00
2.	Innovative and scientific farming practices	84	70.00
3.	Agricultural inputs and marketing prices	96	80.00
4.	Agricultural development programmes	68	56.67
5.	Crop management practices	79	65.83
6.	Organic farming	58	48.33
Increases skill on			
1.	Operating farm machineries and equipments	12	10.00
2.	Intercultural operations	48	40.00
3.	Adoption of innovative technologies	90	75.00
4.	Decision making and problem solving in farming	41	34.17
Developing favourable attitude towards			
1.	Mobile based advisory services	120	100.00
2.	Scientific agriculture	78	65.00
3.	Extension workers and farm scientists	21	17.50
Provides information on			
1.	Agricultural innovations	85	70.83
2.	Weather forecast	13	10.83
3.	Marketing (Digital mandi)	88	73.33
4.	Input availability	34	28.33
5.	Value addition	8	6.67
6.	Training programmes	5	4.17
7.	Agricultural exhibitions and trade fairs	4	3.33
8.	Agricultural business opportunities	18	15.00
9.	Crop insurance	24	20.00
10.	Animal management practices	58	48.33

*Multiple response

ICT enabled extension services had general impact on agriculture such as achieving improved process control and transparency in market information (83.33 per cent) followed by innovations in agriculture through electronic media that support education and training (76.67 per cent), increased productivity due to growth and penetration of mobile ICTs in rural areas (70.00 per cent), increased the adoption of agricultural practices (56.67 per cent), increased the income of the respondents and also reduced the pesticide usage (52.50 per cent) and creation of new opportunities increasing the development of human and social capital (50.83 per cent). Below 50 per cent of the respondents stated that ICT enabled

extension services had impact on creation of new business opportunities (40.00 per cent), enhanced food security and support rural livelihoods (38.33 per cent), reduction of transaction costs in tracking of consumer needs (33.33 per cent) and expansion of perspective of local communities in terms of national or global development (30.83 per cent).

Most of the respondents stated that the services had specific impact on their behaviour such as ICT enabled extension services increased knowledge about agricultural inputs and marketing prices (80.00 per cent) followed by new crop varieties and technologies (75.00 per cent), innovative and scientific farming practices (70.00 per cent), crop management practices (65.83 per cent), agricultural development programmes (56.67 per cent) and organic farming (48.33 per cent).

Further, the ICT enabled extension services increased skill on adoption of innovative technologies (75.00 per cent), intercultural operations (40.00 per cent), decision making and problem solving in farming (34.17 per cent) and operating farm machineries and equipments (10.00 per cent). It developed favourable attitude towards mobile based advisory services (100.00 per cent), scientific agriculture (65.00 per cent) and extension workers and farm scientists (17.50 per cent).

The study also revealed that ICT enabled extension services provided information to the respondents about marketing (Digital mandi) (73.33 per cent), agricultural innovations (70.83 per cent), animal management practices (48.33 per cent), input availability (28.33 per cent), crop insurance (20.00 per cent), agricultural business opportunities (15.00 per cent), weather forecast (10.83 per cent), value addition (6.67 per cent), training programmes (4.17 per cent) and agricultural exhibitions and trade fairs (3.33 per cent).

Conclusion

An overview of the finding revealed that more than fifty per cent of the respondents had informed that the ICT enabled extension services had general impact on agriculture such as achieving improved process control and transparency in market information (83.33 per cent) followed by innovations in agriculture through electronic media that support education and training (76.67 per cent), increased productivity due to growth and penetration of mobile ICTs in rural areas (70.00 per cent), increased the adoption of agricultural practices (56.67 per cent). Less than 50 per cent of the respondents stated that ICT enabled extension services has impacted on creation of new business opportunities (40.00 per cent), enhanced food security and support rural livelihoods (38.33 per cent), reduction of transaction costs in tracking of consumer needs (33.33 per cent) and expansion of perspective of local communities in terms of national or global development (30.83 per cent), as perceived by the respondents.

It also revealed that ICT enabled extension services provided information to the respondents about marketing (Digital mandi) (73.33 per cent), agricultural innovations (70.83 per cent), animal management practices (48.33 per cent), input availability (28.33 per cent), crop insurance (20.00 per cent), agricultural business opportunities (15.00 per cent), weather forecast (10.83 per cent), value addition (6.67 per cent), training programmes (4.17 per cent) and agricultural exhibitions and trade fairs (3.33 per cent).

Hence, it could be concluded that the ICT enabled extension services had somewhat greater influence on agricultural activities of the respondents and it has helped them to gain knowledge and skill. It has developed the favourable attitude towards ICT related aspects. Most of the respondents were interested to know different applications related to ICT.

References

1. Chhachar AR, Querestic B, Khushk GM, Ahmed S. Impact of ICTs in Agriculture Development, Journal of Basic Applied Scientific Research. 2014; 4(1):281-288.
2. Jamwal S. Perception of Agriculture Staff in the Implementation of ICT in Agriculture and Rural Development in J & K state (India), International Journal of Information Technology and Knowledge Management. 2011; 4(2):403-407.
3. Perumal G. The Impact of Information Technology in Indian Agriculture, Asian Journal of Extension Education. 2004; 23:122-128
4. Rebekka Syiem, Saravanan Raj. Access and Usage of ICTs for Agricultural and Rural Development by the Tribal Farmers in Meghalaya State of North East India, Journal of Agricultural Informatics. 2015; 6:24-41.
5. Siddam Siva Ganga Yeshwanth. Attitude, Knowledge and Extent of Utilization of ICT Tools among the Staff and Students of Faculty of Agriculture, Unpublished M.Sc. (Ag.) Thesis, Annamalai University, Annamalai Nagar, 2016.