Use of ICT Components by the Extension Personnel of Karnataka State

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ABSTRACT

The Investigation was carried out in the year 2012 – 2013 to analyze the Use of ICT components by the Extension Personnel in Belgaum district of Karnataka. The study exposed that majority of the extension personnel were from middle age group (58.82 %), nearly one third of the extension personnel had education upto graduation level (32.35 per cent) and majority of the extension personnel (66.67 %) had not received Information and Communication Technology oriented trainings and the sources of information namely, television and print media used cent percent (100 %) by the extension personnel. It was observed that large proportion of the extension personnel (62.75 %) had medium level of use of ICT components for transfer of agricultural technology. The study revealed that with increased level of education, trainings undergone on ICT, sources of information of the extension personnel were having significant and positive relationship with the level of use of ICT components for the transfer of agricultural technology. The age of the extension personnel showed negative and significant relationship with the use of ICT components for transfer of agricultural technology.

Key words: *Information Communication Technology (ICT); Extension personnel.*

This is the era of information technology revolution. Millions of rupees are being pumped in to the field of ICT to enable agricultural extension services by National and International agencies to reduce the gap between information haves and information have- not's. In this ICT agitated era, it is very essential to integrate ICT with agricultural research and extension systems to provide quality information to make them globally competent. The term ICT (Information Communication Technology) was coined by Stevenson in 1997. Rapid innovations in telecommunications, semi-conductors, micro processors, fibre optics and micro electronics are the engines of growth for development of countries across the world. These innovations are being referred to as Information Communication Technology (ICT). The ICT is the term used to describe tools and processes to access, retrieve, store, organize, manipulate, produce, present and exchange information by electronic and other automated means. It includes a range of technologies starting from radio, television, telephone up to modern technologies like mobile phone, multimedia, internet and satellite based communication systems. In today's world of competition information is the key word to success. Use of internet has given the globe a shrinking effect. Every kind of information is only a few clicks away. Availability of right information at the right time in a right ways to right people can make all the difference. The time has come to exploit this medium to the best suited interest in the field of agriculture.

The advancements in the ICT can be utilized for providing accurate, timely, relevant information and services to the farmers, thereby facilitating an environment for more remunerative agriculture. Agriculture continues to be the ICT in agriculture is an emerging field focusing on the enhancement of agricultural and rural development in India. It involves ways to use Information and Communication Technologies occupation and way of life for more than half of the Indian population even today. Quick dissemination of technological information from Agricultural Research Systems to the farmers in the field and reporting of farmer's feedback to the research system is one of the critical inputs in transfer of agricultural technology.

METHODOLOGY

The present study was conducted in Belgaum district of Karnataka state during the year 2012-2013. Belgaum, Gokak, Saundatti, Hukkeri and Bailhongal tahsils of Belgaum district were selected for the study. These tahsils have 17 Raitha Samparka Kendras (RSK's) i.e. Farmers Information Centre. From these 17 RSK's six extension personnel from each RSk were randomly selected for the study. Thus from 17 RSK's the total 102 extension personnel constituted as sample of study. The extension personnel were individually interviewed with the help of well structured interview schedule. The percentage was worked out to describe the profile of the extension personnel and analyzed by using suitable statistical techniques like mean, frequency, percentage, standard deviation and coefficient of correlation.

FINDINGS AND DISCUSSION

The research findings of the study have been explained and tabulated further.

Personal characteristics : It was observed from the Table 1 that majority of extension personnel 58.82 per cent (i.e. between 39 to 56 years) belongs to middle age category. Nearly one third of the extension personnel were having education upto Graduation level 32.35 per cent (i.e. B.Sc. Agri), while 23.53 per cent of extension personnel had secondary education, followed by higher secondary education 26.47 per cent and only 10.79 per cent post graduation (i.e. M.Sc. Agri) and none of them had Ph. D, respectively.

Table 1
Personal profile of the extension personnel (N=102)

Categories	Frequency	Percentage
Age:		
Young age	19	18.63
Middle age	60	58.82
Old age	23	22.55
Education:		
Secondary education (10th)	31	30.39
Higher secondary education (12th)	27	26.47
Graduation	33	32.35
Post graduation	11	10.79
PhD	00	00.00
Trainings received		
Trainings received especially on ICT	34	33.33
Trainings received other than ICT	88	86.27
Trainings received on both	56	54.90
None	08	07.84
Sources of Information:		
Internet Access	46	45.09
Television	102	100.00
Radio	58	56.86
Print media	102	100.00
Friends/Relatives	44	43.15

Majority of the extension personnel (86.27 %) gone through all trainings other than ICT followed by the extension personnel (54.90 %) who received ICT trainings as well as other trainings, only 33.33 per cent extension personnel received trainings especially on ICT oriented and 7.84 per cent extension personnel have not undergone any trainings. The sources of information namely, television (100.00 %) and print media (100.00 %) were used by cent per cent of the extension personnel as a source of information, followed by Radio (56.86 %), internet access (45.09 %) and friends/relatives (43.15 %) respectively.

Table 2
Extent of use of selected ICT components by the extension personnel (N=102)

Sr. No.	ICT Tools	Extent of use		
		Regularly	Occasionally	Never
1.	Radio programmes	03 (02.94)	34 (33.33)	65 (63.73)
2.	Television programmes	00 (00.00)	06 (05.88)	96 (94.12)
3.	Documentation/dissemination of agricultural information	23 (22.55)	64 (62.75)	15 (14.70)
4.	Getting information from the internet	00 (00.00)	49 (48.04)	53 (51.96)
5.	Use of slide projector	36 (35.29)	64 (62.75)	02 (01.96)
6.	Use of mobile phones	102 (100.00)	00 (00.00)	00 (00.00)
7.	Use of fax machines	04 (03.92)	05 (50.00)	47 (46.08)
8.	Use of organizational e-mail	04 (03.92)	25 (24.51)	73 (71.57)
9.	Use of multimedia to present information in different ways	34 (33.33)	68 (66.67)	00 (00.00)
10.	Use of audio cassette to teach farmers	00 (00.00)	00 (00.00)	102 (100.00)
11.	Use of kiosks for information	06 (05.88)	38 (37.25)	58 (56.87)
12.	Use of organizational website for browsing information	04 (03.92)	26 (25.49)	72 (70.59)
13.	Use of video films containing agricultural programme	00 (00.00)	44 (43.13)	58 (56.87)
14.	Use of digital/video camera	93 (91.18)	09 (08.82)	00 (00.00)
15.	Use of print media	102 (100.00)	00 (00.00)	00 (00.00)

Figures in parentheses indicate percentage

Use of selected ICT components : The extent of use of ICT components for transfer of agricultural technology in seventeen RSKs by the extension personnel were presented in Table 2. It was observed that majority of the extension personnel were using mobile phones (100.00 %), print media (100.00 %) and digital/video camera (91.18 %) regularly followed by use of multimedia to present information (66.67 %) slide projector (62.75 %) Documentation/ dissemination of agricultural information (62.75 %) and fax machine (50.00 per cent) occasionally were used by extension personnel. Some ICT components such as television programme (94.12 %), organizational e-mail (71.57 %), organizational website for browsing information (70.59 %), radio (63.73 %), kiosks for information (56.87 %), video films (56.87 %) and internet (51.96 %), were never used by the extension personnel. Use of audio cassette to teach farmers were not at all used by extension personnel.

Table 3
Distribution of extension personnel according to their use of ICT components (N=102)

Category	Number	Percentage
Low (Upto 8 score)	17	16.66
Medium (9-14 score)	64	62.75
High (15 & above score)	21	20.59
Total	102	100.00

The data in Table 3 revealed the majority of extension personnel belonged to middle category (62.75 %), followed by high category (20.59 %) and remaining 16.66 per cent of respondents fell under low category respectively.

Relationship between profile and use of ICT components : The attributes like education, training received and source of information were having significant and positive relationship with the use of ICT components by the extension personnel at 0.01 and 0.05 level of significance. The results further revealed that age had negatively significant relationship with the use of ICT components by the extension personnel. The details are presented in Table 4.

Table 4
Relationship between profile and use of ICT components by the extension personnel

Independent variables	r-value
Age	-0.441**
Education	0.553**
Training	0.471**
Source of Information	0.210*

** Significant at the 0.01 level.
* Significant at the 0.05 level.

Constraints and suggestions : The information regarding the constraints faced and suggestions made by the extension personnel while using the ICT components is presented in Table 5.

Table 5
Distribution of extension personnel according to their constraints while using the ICT components

Sr. No.	Constraints	Yes	No	Rank
1.	Lack of on job training for ICTs	90 (88.24)	12 (11.76)	I
2.	Lack of technical know-how	87 (85.29)	15 (14.71)	II
3.	Low level of education of farmers	78 (76.47)	24 (23.53)	III
4.	Inadequate ICTs components	72 (70.59)	30 (29.41)	IV
5.	Lack of common language or programs	71 (69.61)	31 (30.39)	V
6.	Complexity in using ICT	69 (67.65)	33 (32.35)	VI
7.	Lack of confidence in operating ICT facilities such as computers, CD Rom	67 (65.69)	35 (34.31)	VII
8.	High costs of computer and other ICTS	45 (44.12)	57 (55.88)	VIII
9.	No time to learn about the internet	43 (42.16)	59 (57.84)	IX
10.	Lack of internet access in the rural areas	38 (37.25)	64 (62.75)	X
11.	Lack of electricity	37 (36.27)	65 (63.73)	XI
12.	Lack of funds	36 (35.30)	66 (64.70)	XII
13.	Lack of supportive government policies and legislation on ICTS	28 (27.45)	74 (72.55)	XIII
14.	The information is not of relevance	09 (08.82)	93 (91.18)	XIV
15.	Poor benefits in using ICT	04 (03.92)	98 (96.08)	XV

Figures in the parentheses indicate percentages

Table 5 indicated that, among the constraints faced by, the extension personnel in utilizing ICTs for transfer of agricultural technology lack of on job training for ICTs was ranked I, followed by lack of technical know-how (II rank), low level of education of farmers (III rank), inadequate ICTs components (IV rank), lack of common language or programs (V rank), complexity in using ICTs (VI rank), lack of confidence in operating ICT facilities such as computers, CD Rom (VII rank), high costs of computer and other ICTS (VIII rank), no time to learn about the internet (IX rank), lack of internet access in the rural areas (X rank), lack of electricity(XI rank), lack of funds (XII rank), lack of supportive government policies and legislation on ICTs (XIII rank), information is not of relevance (XIV rank), poor benefits in using ICTs (XV rank).

Suggestions:

1. Providing appropriate training regarding ICT components to extension personnel.
2. Each RSK should have self sufficiency with ICT components like computers, slide projectors etc.
3. Internet connections should be provided to each RSK.
4. Representative/expert to each RSK should be provided by the state department of agriculture.
5. Awareness regarding ICT components is needed to be taken under major priorities.
6. Sufficient funds should be provided to each RSK for its worth while working with special reference to use of ICT's by the extension personnel.
7. Regular electricity supply is needed for proper working and use of ICT components.

CONCLUSION

The study indicated that, more than half of the extension personnel were middle aged and nearly one third of the extension personnel were having education upto Graduation level. Due to the lack of ICT trainings organized by the state department of agriculture to the RSK extension personnel's they were not upto the mark. In trainings undergone in ICT, only one third of the extension personnel received trainings in ICT oriented. This hindered the use of ICT components in RSK. The majority of the extension personnel were using television and print media as major sources of information followed by radio and internet. Apart from this they were also getting information through bimonthly meetings and trainings. The greater part of the extension personnel belonged to medium level of use of ICT components. This shows that only a small number of extension personnel were using ICT components to give information about transfer of agricultural technologies. This might be because of lack of specific training in ICT or might be due to non availability of ICT components in their RSKs. Hence, the state department of agriculture should take steps to provide ICT training to all extension personnel and also provide ICT components facility to all RSKs.

Independent variables like education, trainings received and sources of information were positive and highly correlated with use of ICT components by the RSK extension personnel for transfer of agricultural technology, But the extension personnel's were facing some constraints in using ICT components and thereon made some suggestions to overcome the constraints. This enables them to utilize the ICT components with full potential and develop a favorable attitude towards ICTs use, so that effective transfer of technology takes place.

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