



Research Article

ACCESSIBILITY OF INFORMATION AND COMMUNICATION TECHNOLOGIES AMONG SCIENTISTS WORKING IN VARIOUS KRISHI VIGYAN KENDRA

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Received: July 03, 2018; Revised: July 12, 2018; Accepted: July 13, 2018; Published: July 15, 2018

Abstract: The role of Information and Communication Technology (ICTs) in the Krishi Vigyan Kendras (KVKs) and research institutions is becoming increasingly prominent because of the potential value of such technologies. ICTs can be used to increase effectiveness and efficiency of extension professional/scientists in KVK. So, in this era of information revolution, the KVK Scientists should be encouraged to use ICTs for different extension activities and field work. In this context a research study was undertaken for 304 scientists working in different KVKs in Madhya Pradesh and Chhattisgarh. The findings of the study indicate that about half (51.98%) of the respondents possessed medium level of availability of ICTs, while majority (56.93%) of the KVK Scientists possessed medium to high level of accessibility of ICT.

Keywords: Availability, Accessibility, Information and Communication Technology, Krishi Vigyan Kendra

Citation: Sharma Rohan, *et al.*, (2018) Accessibility of Information and Communication Technologies among Scientists Working in Various Krishi Vigyan Kendra. International Journal of Agriculture Sciences, ISSN: 0975-3710 & E-ISSN: 0975-9107, Volume 10, Issue 13, pp.- 6633-6635.

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Introduction

Information and communication technology in agriculture (ICTs in agriculture), also known as e-agriculture, is developing and applying innovative ways to use ICTs in the rural domain, with a primary focus on agriculture. Nowadays agricultural extension is facing a large quantity of innovations, discoveries and information in different fields of science, skills and agricultural technology and has got the latest findings from the resources of producing information and make it accessible for the users and for being successful in this important matter, it is necessary to have a powerful and effective informing system [1]. ICTs has an important role in connecting research, extension and the market toward expanding the professional and entrepreneurship abilities, capacities among the experts and the agricultural communities [2]. The important use of ICTs relates to its potential to bring about transformation in agricultural through the enhancement of education and research though the Agricultural Science and Technology Innovation (ASTI) System. Perhaps the most straight-forward way in which this can occur is through the conventional agricultural extension system [3]. Scientists working in different KVK's are playing a proactive role in transferring new technology at field level with beneficial impacts. They are continuously engaged in improving their professional knowledge and skills by keeping themselves abreast with latest information. Their professional growth and development is enhanced by accruing current information through the use of new information from different source like peers electronic means of communication mainly through professional forums and electronics means of communication through information and communication technology. Information and Communication Technology (ICT) has, in fact, changed the paradigm used in everyday life. Information and Communication Technology provides information about any event-taking place anywhere in the world, at any time, available to any person anywhere in the world at any time. Keeping these things in mind a study was formulated to know the present status of availability and accessibility of different information and communication technologies among scientists working in different KVKs in Madhya Pradesh and Chhattisgarh.

Research Methodology

The study was carried out in Madhya Pradesh and Chhattisgarh State. There are 47 KVKs comes under the Jurisdiction of SAUs, NGOs and ICAR in MP and 21 KVKs comes under the Jurisdiction of SAUs and NGOs in CG. The study population included all scientists of KVKs of all SAUs, NGOs and ICAR Jurisdiction in both the States. A structured questionnaire was designed based on related literature and objectives of the study and variables and it was send to all scientists of KVKs comes under study area. Validity of the instrument was ensured through a panel of experts. Data was analyzed with Statistical Package for Social Sciences (SPSS) using frequencies, percentages, mean and multiple correlation and regressions.

Result & Discussion

Accessibility of Information and communication Technologies (ICTs) among KVK Scientists

The results presented in [Table-1] indicated that majority of KVK scientists were very much accessible with ICT tools like Mobile phone (79.21%), Internet services (76.73%), Computer system (74.26%), Multimedia (64.35%) and Internet via mobile phone (49.50%), whereas nearly half of them were very much accessible with ICT tools like landline telephone (51.98%), multimedia projectors (47.02%), television (44.55%), video conferencing (44.55%) and video films (42.08%). A perusal of [Table-1] also revealed that majority of the respondents was not accessible with ICT tools like satellite dish (59.41%), Tele-centre (40.60%) and YouTube. Further the data in [Table-1] indicated that according to accessibility Mobile phone was ranked first followed by Internet services, Computer system, Multimedia, Internet via mobile phone, Landline telephone, Television, Multimedia projectors, Video films, Video conferencing, Digital video camera & player, e-books, e-journals, YouTube, Tele-centre and Satellite dish which were ranked second, third, fourth, fifth, sixth, seventh, eighth, ninth, tenth, eleventh, twelfth, thirteenth, fourteenth, fifteenth and sixteenth respectively.

Table-1 Distribution of respondents according to accessibility of ICTs (n= 202)

SN	ICTs	Very much accessible	Very accessible	Accessible	Rarely accessible	Not Accessible	Mean Score	Rank
1	Mobile phone	160 (79.21)	20 (9.90)	18 (8.91)	03 (1.49)	01 (0.49)	4.65	I
2	Internet services	155 (76.73)	25 (12.38)	13 (6.44)	08 (3.96)	01 (0.49)	4.60	II
3	Computer system	150 (74.26)	30 (14.85)	15 (7.43)	05 (2.47)	02 (0.99)	4.58	III
4	Multimedia	130 (64.35)	40 (19.80)	20 (9.90)	10 (4.95)	02 (0.99)	4.41	IV
5	In5ternet via mobile phone	100 (49.50)	55 (27.23)	35 (17.33)	09 (4.45)	03 (1.49)	4.34	V
6	Landline telephone	105 (51.98)	45 (22.28)	35 (17.33)	16 (7.92)	01 (0.49)	4.17	VI
7	Television with cable	90 (44.55)	55 (27.23)	45 (22.28)	10 (4.95)	02 (0.99)	4.09	VII
8	Multimedia projectors	95 (47.02)	45 (22.28)	45 (22.28)	15 (7.43)	02 (0.99)	4.06	VIII
9	Video films	85 (42.08)	65 (32.18)	30 (14.85)	20 (9.90)	02 (0.99)	4.04	IX
10	Video conferencing	90 (44.55)	50 (24.75)	40 (19.80)	19 (9.41)	03 (1.49)	4.01	X
11	Digital Camera	75 (37.13)	75 (37.13)	25 (12.38)	20 (9.90)	07 (3.46)	3.94	XI
12	e-books	70 (34.65)	60 (29.70)	45 (22.28)	25 (12.38)	02 (0.99)	3.84	XII
13	e-journals	20 (9.90)	40 (19.80)	40 (19.80)	42 (20.8)	60 (29.70)	2.79	XIII
14	YouTube	30 (14.85)	35 (17.33)	45 (22.28)	37 (18.31)	55 (27.23)	2.74	XIV
15	Tele-centre	10 (4.95)	20 (9.90)	40 (19.80)	50 (24.75)	82 (40.60)	2.13	XV
16	T V with Satellite dish	02 (0.99)	15 (7.43)	35 (17.33)	30 (14.85)	120 (59.41)	1.75	XVI

(Figures in parenthesis indicate percentage)

Table-2 Classification of respondents according to accessibility of ICTs

Accessibility of ICTs	Frequency	Percentage
Low (<39 Score)	27	13.36
Medium (39-67 Score)	120	56.93
High (>67 Score)	55	29.7

The overall accessibility of ICTs among KVK Scientists was studied and results are presented in [Table-2]. A perusal of data in [Table-2] indicated that majority (56.93%) of the respondents possessed medium level of accessibility of ICTs, while 29.7 percent possessed high and only 13.36 percent possessed low level of availability of ICTs.

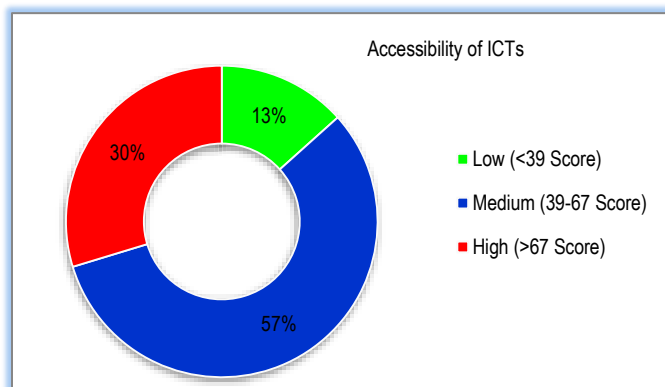


Fig-1 Distribution of respondents based on accessibility of ICTs

This finding was in conformity with the findings of Olatokun (2007) [4] who reported that computers, printers, Internet, scanners, facsimile, telephones, mobile phones, and photocopiers were accessible for women academics in their institutions, while 11.7% respondents attested to the fact that videoconferencing facilities were accessible in their institution in Nigeria, Aramide *et al.* (2015) [5] revealed that a low level of access to laboratory-based ICT facilities ($x = 2.18$) and a low level of ICT use ($x = 1.93$) among the science teachers. Moreover, the findings also revealed specialized classroom/laboratory ($x = 0.52$), and library ($x = 0.52$) as the most preferred location of ICT access by science teachers in FUSs in Nigeria and Mavellas *et al.* (2016) [6] looked at the availability of common educational Information communications Technologies (ICTs) in secondary schools, using a high school in Kwekwe, Zimbabwe.

Conclusion

Thus, it can be concluded that majority of KVK scientists possessed medium to high level of accessibility of ICTs. The possible reason for medium to high level of accessibility of ICTs could be due to the fact that ICT has been a tool for achieving meaningful societal transformation. This transformation is a function of reliable agricultural research network. A network is a group of individuals or institutions

linked together because of commitment to collaborate in solving a common agricultural problem(s) and to use existing resources more effectively. The use of ICTs enhance research network in various ways which are facilitated through communication technologies like electronic mail, electronic conferencing, etc. Through these means scientists, administrators and information personnel are provided with rapid and reliable communication while increasing productivity and decreasing communication costs by reducing the physical means of communication channels [7].

Application of research: This research is conducted largely to identify the status of accessibility of different ICT tools among KVK scientists to improve the utility of ICTs for future purposes

Research Category: Mail (or postal) survey

Abbreviations: ICT - Information and Communication Technology, KVK - Krishi Vigyan Kendra, SAU - State Agriculture University, ASTI – Agricultural Science and Technology Innovation System, NGO – Non-Government Organization, CG – Chhattisgarh, SPSS – Statistical Package for Social Science

Acknowledgement / Funding: Author thankful to Rajmata Vijayaraje Scindia Krishi Vishwavidyalaya, Gwalior, Madhya Pradesh, 474002, India

***Research Guide or Chairperson of research:** Professor Dr M. M Patel

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Research project name or number: PhD Thesis

Author Contributions: All author equally contributed

Author statement: All authors read, reviewed, agree and approved the final manuscript

Conflict of Interest: None declared

Ethical approval: This article does not contain any studies with human participants or animals performed by any of the authors.

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