



Constraints Faced by Agricultural Scientists in Agricultural Institutions for Exploring Agricultural Information in Rajasthan

Naresh Kumar Kumawat¹, Aravind Kumar Jhajharia², Nitesh Kumar Tanwar³ and Hansa Yadav⁴

Department of Agricultural Extension and Communication,
Swami Keshwanand Rajasthan Agricultural University, Bikaner, Rajasthan, India.

ABSTRACT

The present study was conducted in Jodhpur and Bikaner District of Rajasthan State. The agricultural scientists engaged in research and extension of those institutions was identified. Out of these, 120 agricultural scientists were purposively selected for the present study as respondents. Two dependent and fifteen independent variables were included in the present study. An overview of the findings found that the majority (40.83%) of the agricultural scientists belonged to middle age group (36 to 50 yr), were male (83.33 %), about 48.33 per cent had less service experience (<10 yr), three-fifth (60.00%) had medium level of income (Rs. 10 to Rs. 20 lakh), all scientists were frequently using phone as a source of information, about 69.17 per cent had not received any training on ICT.

Key Words: Agriculture, Computer, Constraint, Internet, Mobile, Scientists.

INTRODUCTION

The world is witnessing a revolution in Information and Communication Technology (ICT), which is resulting in the rapid and accurate transmission of messages from source to recipient. ICT is defined as the integration of information technology (IT) with media broadcasting technologies, audio/video processing and transmission, and telephony (Kumar, 2019). In agricultural extension, information and communication technology is critical for expanding extension functionaries' knowledge resources, facilitating better information access, supplementing insufficient technical manpower, ensuring gender equity in the technology transfer process, and assisting in the development of efficient feedback mechanisms (Saravanan, 2010). Agricultural

scientists, in collaboration with extension workers, play a catalytic role in encouraging farmers to adopt new and improved technology. Many farmers may rely on extension staff for advice on best practices in agriculture.

MATERIALS AND METHODS

The study was framed to conduct purposively in selected districts of Rajasthan namely, Bikaner and Jodhpur. For the selection of agricultural institutions, a separate list of SAUs and ICAR agricultural institutions was procured. There were total twelve agricultural institutions situated in both selected districts namely; Bikaner and Jodhpur. Thus, all twelve agricultural institutions were selected purposively for the present study. For the

Corresponding Author's Email: kumawatnaresh155@gmail.com

¹Ph.D. Student (Ag. Ext.), Department of Agricultural Extension and Communication, Swami Keshwanand Rajasthan Agricultural University, Bikaner, Rajasthan, India.

²Assistant Professor, Department of Agricultural Extension and Communication, Sri Karan Narendra Agriculture University, Jobner, Jaipur, India.

³Ph.D. Student (Ag. Ext.), Department of Agricultural Extension and Communication, Maharana Pratap University of Agricultural & Technology, Udaipur, Rajasthan, India.

⁴M.Sc. Student (Ag. Ext.), Department of Agricultural Extension

selection of agricultural scientists, a pilot study has been conducted before the sampling procedure for making sampling convenient so that appropriate sample can be drawn. A separate list of all the working agricultural scientists in institutions was prepared with the help of Directors, Heads, clerks etc. of respective institutions. From the prepared list, a total of 120 respondents were drawn out by using proportionate random sampling method. Appropriate statistical techniques like frequency, percentage, mean and rank order were used in the study.

Mean per cent score (MPS): MPS was obtained by multiplying total obtained score of the respondents by hundred and dividing by the maximum obtainable score under each practice.

$$\text{MPS} = \frac{\text{Total score obtained by the respondents}}{\text{Maximum obtainable score}} \times 100$$

RESULTS AND DISCUSSION

Constraints faced by the agricultural scientist about ICTs apparatus

Constraint refers as situation or circumstances which impede restrict or limit the activity or performance of an individual. Constraints play a vital role in adoption of any innovation or idea. In this study, it was defined as the items of difficulties faced by the scientists in using ICTs apparatus for exploring agricultural information. For better performance, it is very essential to minimize the constraints.

Physical constraints

The data (Table 1) showed the severity of physical constraints faced by agricultural scientists. The lack of repairing facilities in institute was most severe (MPS 71.94) constraint which was rank first and lack of adequate infrastructure facilities (MPS 65.55) was ranked second. The least severe constraint was low speed of internet (MPS 58.33), which was ranked last.

Among the physical constraints, the most severe constraint perceived by the scientists of Bikaner and Jodhpur district was lack of repairing facilities in institute with MPS 67.97 and MPS 74.87, respectively. The Least severe constraint perceived by the scientists of Bikaner and Jodhpur district was “low speed of internet” with MPS 53.59 and MPS 61.83, respectively. It might be due fact that in every agricultural institutions administration provide facilities to their staff according to available resources and facilities. The similar findings were observed by Olubanke and Stephen (2012)

Technical constraints

The data showed that online advertisements distract attention was most severe (74.72 MPS) constraint followed by service breakdown creates problem in internet access (65.00 MPS). The least severe constraint perceived by the respondents was inability to internet access due to electricity failure (53.61 MPS). Among the technical constraints, the most severe constraint perceived by the scientists of Bikaner and Jodhpur district was “online advertisements distract attention” with 77.77 MPS and 72.46 MPS, respectively. The least severe constraint perceived by the scientists of Bikaner district was “inability to internet access due to electricity failure” with MPS 47.05, whereas, the least severe constraint perceived by the scientists of Jodhpur district was “take more time to download/view page” with MPS 56.03. It might be due the reason that scientists of all the selected agricultural institutions required training related to instalment of antivirus software because they were having less knowledge regarding this. The similar findings were observed by Maheshwari and Upadhyay (2015).

Economic constraints

It was found that the cost of internet service providers is high was most severe constraint (77.22 MPS), followed by high cost of computer, modem etc. with 71.11 MPS. Among the economic constraints, the least severe constraint perceived by the respondents was high cost of internet training with 55.27 MPS. Among the economic constraints,

Constraints Faced by Agricultural Scientists

Table 2. Various constraints faced by the agricultural Scientists about ICTs apparatus for exploring agricultural information's.

Sr. No.	Constraints	Agricultural institution of Bikaner (n ₁ =51)		Agricultural institution of Jodhpur (n ₂ =69)		Overall(n=120)	
		MPS	Rank	MPS	Rank	MPS	Rank
A	Physical Constraints						
1	Inadequate availability of computer	57.51	III	66.18	III	62.50	III
2	Inadequate availability of internet facility	55.55	IV	63.28	V	60.00	V
3	Inadequate accessibility to internet service	54.90	V	64.25	IV	60.27	IV
4	Lack of adequate infrastructure facilities	60.13	II	69.56	II	65.55	II
5	Lack of repairing facilities in institute	67.97	I	74.87	I	71.94	I
6	Low speed of internet	53.59	VI	61.83	VI	58.33	VI
B	Technical Constraints						
1	Low network connectivity	54.90	V	62.80	IV	59.44	IV
2	Service breakdown creates problem in internet access	58.82	III	69.56	II	65.00	II
3	Inability to internet access due to electricity failure	47.05	VI	58.45	V	53.61	VI
4	Online advertisements distract attention	77.77	I	72.46	I	74.72	I
5	Security concerns like hacking of internet	61.43	II	63.76	III	62.77	III
6	Take more time to download/view page	55.55	IV	56.03	VI	55.83	V
C	Economic Constraints						
1	High cost of internet training	52.94	VI	57.00	V	55.27	VI
2	Cost of internet service providers is high	80.39	I	74.87	I	77.22	I
3	High cost of repairing ICTs	63.39	III	71.01	III	67.77	III
4	It is not safe to make shopping, banking etc at internet	57.51	IV	61.35	IV	59.72	IV
5	High cost of computer, modem etc.	67.97	II	73.42	II	71.11	II
6	Poor finance	56.20	V	56.03	VI	56.11	V

the most severe constraint perceived by the scientists of Bikaner and Jodhpur district was cost of internet service providers is high with 80.39 MPS and 74.87 MPS, respectively. The least severe constraint

perceived by the scientists of Bikaner district was high cost of internet training with 52.94 MPS, whereas, the least severe constraint perceived by the scientists of Jodhpur district was “poor finance” with 56.03 MPS.

Table4. Operating constraints faced by the agricultural Scientists about ICTs apparatus for exploring agricultural information's

Sr. No.	Constraint	Agricultural institution of Bikaner (n ₁ =51)		Agricultural institution of Jodhpur (n ₂ =69)		Overall(n=120)	
		MPS	Rank	MPS	Rank	MPS	Rank
D	Operating Constraints						
1	Erratic power supply	49.01	V	59.90	IV	55.27	IV
2	Low ICTs literacy	51.63	IV	55.07	IV	53.61	V
3	Lack of training and practical exposure towards ICTs	65.36	I	75.36	I	71.11	I
4	Insufficient region specific language for using ICTs	60.78	II	60.86	III	60.83	III
5	Lake of support from ICT staff	57.51	III	65.21	II	61.94	II
6	No internet connectivity	46.40	VI	43.96	VI	45.00	VI

Operating constraints

Among the operating constraints, most severe constraint perceived by the respondents was lack of training and practical exposure towards ICTs with 71.11 MPS, followed by lack of support from ICT staff language for using ICTs" with 61.94 MPS. The least severe constraint perceived by the respondents was no internet connectivity with 45.00 MPS.

Among the operating constraints, the most severe constraint perceived by the scientists of Bikaner and Jodhpur district were lack of training and practical exposure towards ICTs with 65.36 and 75.36 MPS respectively. The Least severe constraint perceived by the scientists of Bikaner and Jodhpur district was no internet connectivity with 46.40 MPS and 43.96 MPS, respectively. It might be due to reason that there is no fix curriculum of ICT related trainings by any agricultural institutions. The similar findings were observed by Sharma (2018).

CONCLUSION

The study concluded that majority of the scientists had less training on ICTs. So, efforts may be made to train the scientists in different aspects of ICTs as per the need of the scientists. The efforts should also be made to provide training related to ICT to the scientists for improving the usage of ICT tools. The study also revealed that majority of

the scientists was perceived cost of internet service providers is high towards ICT apparatus. There should also be provision of uninterrupted Wi-Fi facilities in their institutions.

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