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Constraints in using of information and communication technologies by faculty members of state agricultural university

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Abstract

The research was carried out at the CCS Haryana Agricultural University, Hisar in 2021-22 to delineate the constraints in using of information and communication technologies (ICTs) by faculty members of Chaudhary Charan Singh Haryana Agricultural University (CCSHAU), Hisar. Data was collected with the help of well-structured questionnaire and analyzed using Statistical Package for the Social Sciences (SPSS). Twenty-five faculty members were selected randomly from four colleges of the university. Study concluded that fluctuation of internet and power, lack of technical person to troubleshoot, high threat of virus, time management related to use of ICTs, lack of frequently ICTs base training and shortage of time to spend on ICTs were major constraints as faced by the respondents.

Keywords: Extension, organizational, research, teaching and technical

Introduction

As the world's current population will rises from 7.4 to 9.1 billion by 2050, food production will need to increase over this similar time. Therefore, to address agricultural difficulties i.e. satisfying the information needs of farmers in emerging nations and more effective extension services are required. In these situations, ICTs can help to speed up the dissemination of agricultural technologies and innovation from research and development organizations to farmers (World Bank, 2011) [14]. The ability to access and utilize information sources are prerequisite for improved targeting of extension, agricultural programmes and consulting services that promote information sharing and dissemination in the communities (Nain *et. al.*, 2015) [7]. ICT also play a critical role in teaching and research to increase professional capacity building among professionals. Teaching profession is shifting away from teacher-centered, lecture-based training and toward student-centered, interactive learning environments. ICT can be employed as an instructive, communicative, and situational instrument in the educational process (Malik, 2019) [5]. It is found that use of e-learning for educational purposes provides significant advantages over traditional learning (Seoud *et. al.*, 2014) [12]. The current use of ICTs in teaching, research and extension can be increase to assess their usefulness. Simultaneously ICTs are challenge to teachers, researchers and extension specialists in terms of subject specific, technical and proper utilization in agricultural field. Keeping in view the above facts, the

present study carried out to delineate the constraints faced by faculty of CCSHAU in using ICTs.

Materials and Methods

Locale of study: The study was carried out at CCSHAU, Hisar. It is one of Asia's largest agricultural universities located at 29.14N and 75.70E Hisar in the Indian state of Haryana.

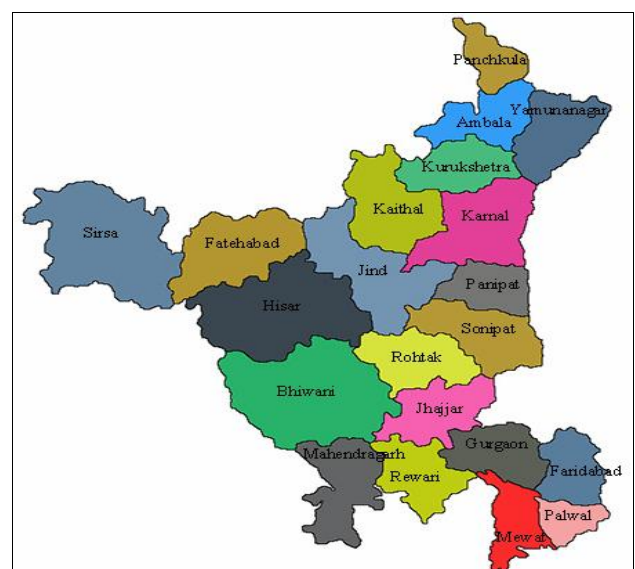


Fig 1: Map of Haryana showing the locale of study

Sampling procedure: Four colleges i.e. College of Agriculture, College of Agricultural Engineering and Technologies, College of Basic Sciences and Humanities and College of Home Science of CCSHAU were selected, purposively. Further, 25 faculty members were selected randomly from each selected college. Thus, a total of 100 faculty members were selected for the present study.



Fig 2: Criteria for selection of respondents

Tools for Data Collection: The data was selected with the help of questionnaire/goggle form especially prepared for the study. Moreover, respondents were informed also about the purpose of the study to take them into the confidence. They were assured that the information collected will be

used only for research purpose and their response and privacy will not be public in any manner

Analysis of Data: The data was tabulated, analyzed and interpreted keeping in view the objectives of the study. Statistical Package for Social Science (SPSS) tool was used for analysis of the collected data.

Constraints Faced by the Respondents in the using of ICTs

Personal constraints faced in using of ICTs

The table 1 shows that time management related to use of ICTs was found major constraint ranked first with highest weighted mean score (WMS) 1.70, followed by shortage of time to spend on ICTs ranked second with WMS (1.64) and lack of expertise about the ICTs ranked third with WMS (1.56). However, not- user friendly programs and software and lack of confidence to use ICTs ranked fourth and fifth with WMS 1.47 and 1.43, respectively. The results may be due to the fact that most of the faculty members in the different colleges had busy working schedule so that they face time constraint in the use of ICTs. Present study got support from the result findings of Omotesho *et. al.* (2012)^[8]; Kale *et. al.* (2017)^[4]; Anand *et. al.* (2020)^[1] and Raviya *et. al.* (2020)^[10] who reported that lack of computer expertise and knowledge were major constraints.

Table 1: Personal constraints faced in using of ICTs (n=100)

S. No.	Statements	Degree of Seriousness			TWS	WMS	Rank Order
		Very Serious	Serious	Not So Serious			
1.	Lack of expertise about ICTs	09	38	53	156	1.56	III
2.	Time management related to use of ICTs	22	48	41	170	1.70	I
3.	Shortage of time to spend on ICTs	07	50	43	164	1.64	II
4.	Lack of confidence to use ICTs	06	31	63	143	1.43	V
5.	Not user-friendly programs and software	07	34	59	147	1.47	IV

Technical constraints faced in using of ICTs

Table 2 describes the technical constraint, lack of technical personal to troubleshoot was found major constraint and ranked first with WMS 1.80, followed by high threat of virus, lack of ICTs training, and lack of technical knowledge regarding ICTs tools ranked second, third and fourth with WMS 1.77, 1.59 and 1.51, respectively. However, lack of internet facility at office ranked fifth constraint with WMS 1.47. The findings can be attributed to the fact that there might be shortage of technical persons to help out the

faculty members in sorting various glitches in the functioning of ICT devices and rising threat of virus due to visiting on unsafe websites or using unprotected devices or lack of installation of anti-virus in computer/laptop. The findings of the in agreement with the study of Jha and Kashyap (2024)^[3] who reported that time management was the major constraint. While, the findings of the study are in consonance with the past study of Rohila *et.al.* (2019)^[11] who reported that lack of technical person, lack of training and weak internet facility were major constraints.

Table 2: Technical constraints faced in using of ICTs (n=100)

S. No.	Statements	Degree of Seriousness			TWS	WMS	Rank Order
		Very Serious	Serious	Not So Serious			
1.	Lack of internet facility in office	11	25	64	147	1.47	V
2.	Lack of technical knowledge regarding ICTs tools	9	33	58	151	1.51	IV
3.	Lack of ICTs training	13	33	54	159	1.59	III
4.	High threat of virus	16	45	39	177	1.77	II
5.	Lack of technical person to troubleshoot	21	38	41	180	1.80	I

Organizational constraints faced in using of ICTs

It is clear from Table 3 that fluctuation of internet and power was found major constraint and ranked first, followed by lack of frequently ICTs base training ranked second with WMS 1.67. While, lack of technical expertise in the institute, lack of fund provision to buy ICTs equipment and

lack of basic and essential infrastructure ranked third, fourth and fifth with WMS 1.63, 1.54 and 1.46, respectively. The findings may be attributed to the fact that training programmes and skill up gradation for faculty members are organized frequently. Fluctuation may be due to large coverage and high numbers of faculty members in the

campus. The study got strength from the study of Sireesha *et al.* (2014) ^[13] who reported that fluctuation of internet was major constraint. Study got support from Rohila *et al.* (2019) ^[11]; Anand *et al.* (2020) ^[1]; Jadeja *et al.* (2026) ^[2]

and Parmar *et al.* (2026) ^[9] who reported that lack of training programme and poor power supply of internet were major constraints.

Table 3: Organizational constraints faced in using of ICTs (n=100)

S. No.	Statements	Degree of Seriousness			TWS	WMS	Rank Order
		Very Serious	Serious	Not So Serious			
1.	Lack of basic and essential infrastructure	08	31	61	146	1.46	V
2.	Lack of fund provision to buy ICTs equipment	11	32	57	154	1.54	IV
3.	Lack of technical expertise in the institute	11	42	47	163	1.63	III
4.	Fluctuation of internet and power	28	43	29	198	1.98	I
5.	Lack of frequently ICTs base training	11	47	42	167	1.67	II

Correlation and regression analysis of respondents' personal profile with constraints in the using of ICTs

Table 4 explains that job experience, job preference and information seeking behavior had significant correlation with constraints of ICTs, whereas age, sex, education qualification, training, parental occupation, rural-urban background and job satisfaction did not show any significant association at 0.05 level of probability. While, in case of partial regression coefficient of faculty members with constraints of ICTs only job commitment was found significant. However, age, sex, education qualification, job experience, rural-urban background, parental occupation, job preference, job satisfaction, training and information seeking behavior did not contributed to constraints of ICTs with faculty members. Further, it is concluded that 11 independent variables included in the study jointly contributed 21.00 per cent variation in the constraints of ICTs with faculty members when other factors were kept constant and remaining 79.00 per cent variation in the study due to other variables. These finding are in contrast of the findings of Malik *et al.* (2020) ^[6]. While in case of the partial regression coefficient job commitment found to be significant.

Table 4: Correlation and regression analysis of respondents' personal profile with constraints in the using of ICTs (n=100)

Variable	Correlation Coefficient	Regression Coefficient	't' values
Age	-0.163 ^{NS}	2.400	-0.813 ^{NS}
Sex	0.123 ^{NS}	-1.843	0.690 ^{NS}
Education Qualification	-0.032 ^{NS}	0.442	-0.858 ^{NS}
Job Experience	-0.242*	-1.297	0.307 ^{NS}
Rural-Urban Background	-0.056 ^{NS}	-0.846	-0.857 ^{NS}
Parental Occupation	-0.070 ^{NS}	0.972	0.0400 ^{NS}
Job Preference	0.256*	2.167	-0.085 ^{NS}
Job satisfaction	-0.029 ^{NS}	0.174	0.229 ^{NS}
Job commitment	-0.012 ^{NS}	0.029	2.278*
Training	-0.179 ^{NS}	-1.372	0.306 ^{NS}
Information seeking behaviour	-0.248*	-0.930	1.176 ^{NS}

Dependent Variable: Constraints

*Significant at 5 per cent level

R²=0.214; Constant Value=31.804

Conclusion

University administration should emphasize on the problems which are faced by faculty members in using ICTs. Moreover, the action plan may be more effective to encounter the constraints must be implemented as soon as possible in campus

References

- Anand S, Prakash S, Yedida S, Singh AK. Constraints faced by farmers in access and use of information and communication technologies (ICTs) in Bihar. *Journal of Pharmacognosy and Phytochemistry*. 2020;9(2):80-85.
- Jadeja KM, Savaliya VJ, Parmar SJ. Constraints and suggestions in utilization of ICT and AI tools among faculties in SAUs of Gujarat. *International Journal of Agriculture Extension and Social Development*. 2026;9(3):661-664.
- Jha S, Kashyap SK. Measure constraints faced by farm women using ICT tools by Garrett Ranking Method. *Advances in Research*. 2024;5(4):242-247.
- Kale RB, Wadkar SK, Jadoun YS, Ravi KN. Constraints encountered in effective utilisation of ICT among the dairy scientists. *International Journal of Applied Research on Information Technology and Computing*. 2017;8(1):51-59.
- Malik AK. Knowledge and usage pattern of information and communication technology among students of CCS Haryana Agricultural University [PhD thesis]. Hisar (Haryana): Chaudhary Charan Singh Haryana Agricultural University; 2019.
- Malik AK, Godara AK, Yadav K, Kumar S. Internet usage behavior among agricultural students in Haryana. *Indian Journal of Agricultural Sciences*. 2020;90(7):1315-1318.
- Nain MS, Singh R, Mishra JR, Sharma JP. Utilization and linkage with agricultural information sources: A study of Palwal district of Haryana state. *Journal of Community Mobilization and Sustainable Development*. 2015;10(2):152-156.
- Omotesho KF, Ogunlade IO, Muhammad L. Assessment of access to information and communication technology among agricultural extension officers in Kwara State, Nigeria. *Asian Economic and Social Society*. 2012;2(2):220-225.
- Parmar H, Salunkhe SR, Sanjay VC, Parmar A, Anand B. ICT-enabled agricultural extension services in South Gujarat: Constraints and suggestions. *Journal of Scientific Research and Reports*. 2026;32(5):368-376.
- Raviya PB, Savaliya VJ, Tavethiya BH. Constraints in accessing agricultural information through ICT services. *Journal of Pharmacognosy and Phytochemistry*. 2020;9(4):368-369.
- Rohila AK, Kumar A, Ghanghas BS, Mahalle SL, Nimbrayan PK, Maann DS, *et al.* Eco-friendly agricultural practices and their assent by farmers in

- Haryana State of India. Applied Ecology and Environmental Research. 2019;17(3):5383-5400.
12. Seoud ELS, Eddin TI, Sddiek N, Ghenghesh P, Khouly EM. The impact of e-learning on Egyptian higher education and its effect on learners' motivation: A case study. Computer Science and Information Technology. 2014;2(3):179-187.
 13. Sireesha P, Rao BS, Raju DT. Constraints encountered in the utilization of information and communication technology (ICT) tools by various animal husbandry organizations in Andhra Pradesh. International Journal of Innovative Research in Science, Engineering and Technology. 2014;3(6):13693-13701.
 14. World Bank. ICT in agriculture: Connecting smallholders to knowledge, networks, and institutions. Washington (DC): World Bank; 2011.