

**FACTORS AFFECTING KNOWLEDGE ABOUT E-EXTENSION AMONGST
THE POSTGRADUATE SCHOLARS OF AGRICULTURAL
EXTENSION AND COMMUNICATION**

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ABSTRACT

Electronic extension or e-extension refers to the process of use of electronic technologies especially information and communication technology to enhance the speedy transfer of technology to the farming community. The postgraduate scholars studying agricultural extension and communication are considered as the future generation of extension personnel to develop farmers and farming. It is thus, expected that they should be well equipped with knowledge on various e-extension related components such as knowledge on computer operation, computer software, internet communication, agricultural and educational portals and knowledge of smartphone operations. Hence the present study was carried out on a random proportionate sample of a total of 120 postgraduates selected from all four SAUs of Gujarat. The study reveals that the majority (67.50 per cent) of the postgraduate scholars of agricultural extension and communication of State Agricultural Universities of Gujarat state had a very high level of knowledge about e-extension related to all the components, followed by 20.00, 11.50 and 0.80 per cent of them were with a high, medium and low level of knowledge about e-extension related components, while none of them was with the very level of such knowledge. The level of knowledge about e-extension related components of the postgraduate scholars of SAUs of Gujarat state was observed higher amongst those who were highly skilful in using e-extension related components, more lively in the library exposure, high level of a tendency to gather information for academic and career-related tasks, multidimensional preferences to be associated with many agricultural jobs or professions, activeness in communicating effectively with others, more dynamic in personality to welcome innovative ways of living life, highly experienced with e-extension systems, active users of e-extension systems for multidimensional reasons.

Keywords : e-extension knowledge, postgraduate scholars of agricultural extension

INTRODUCTION

Information and Communication Technologies (ICTs) have transformed the process of communication. Nowadays, it is advised to incorporate ICTs in every field of development. Agricultural extension and communication play a key role in the development of farmers and farming through extension education, services and work (Jagadeeswari *et al.*, 2019 and Darji *et al.*, 2017). The various ways have been implementing by extension personnel to carry out functions of extension effectively, e-extension if one of them. The e-extension is electronic extension services system is a network of providing more efficient alternatives to a traditional extension system for the development of farmers and agriculture and allied fields, The e-extension is also known as an extension over cyberspace, the e-extension includes effective use of ICT, national digital interactive multi-media to facilitate dissemination of agricultural

technology using international information networks, internet, expert systems, multimedia learning systems and computer-based training systems to improve information access to the farmers, extension workers, research scientists and extension managers. The postgraduate scholars studying agricultural extension and communication are considered as the future generation of extension personnel to develop farmers and farming. It is thus, expected that they should be well equipped with knowledge on various e-extension related components such as knowledge on computer operations, computer software, internet communication, agricultural and educational portals and applications of smartphone operations in the process of transferring farm technology to its real users. Hence, the present study was conducted with two objectives viz. study the level of knowledge of the postgraduate scholars of agricultural extension and communication about e-extension and factors affecting their level of knowledge of e-extension.

OBJECTIVES

- (1) To know the level of knowledge of the postgraduate scholars of agricultural extension and communication about e-extension
- (2) To know the factors affecting knowledge about e-extension amongst the postgraduate scholars of agricultural extension and communication

METHODOLOGY

The present study was carried out on a random proportionally selected random sample of a total of 120 postgraduates studying agricultural extension and communication from all the four State Agricultural Universities of Gujarat located at Anand, Navsari, Junagadh and Sardarkrushinagar Dantiwada. The knowledge of the e-extension system was measured measuring understood information possessed by the postgraduates on computer operations, computer software, internet communication, agricultural and educational portals and applications of smartphone operations in the process of transferring farm technology to its real users. The knowledge was measured on 82 items in terms of three-point continuum viz. nil knowledge, partial knowledge and complete knowledge and scores of 0, 1 and 2, respectively were assigned. The total score was worked out by summing scores of all items to quantify this variable. The coefficient of correlation was computed to know the relationship between factors of the postgraduate scholars and their level of knowledge about e-extension related components.

RESULTS AND DISCUSSION

The level of knowledge of the postgraduate scholars of agricultural extension and communication about e-extension

It is obvious from Table 1 that the majority (67.50 per cent) of the postgraduate scholars of agricultural extension and communication of State Agricultural Universities of Gujarat state had a very high level of knowledge about e-extension related to all the components, followed by 20.00, 11.50 and 0.80 per cent of them were with a high, medium and low level of knowledge about e-extension related components, while none of them was with the very level of such knowledge. The reason for the large majority (87.50 per cent) of respondents with above high to the very high level of knowledge about e-extension related components might be the availability of digital library in the universities, the audiovisual laboratory in the department of extension education, learning of compulsory computer-related courses as a part of course curriculum in the undergraduate and self-

motivation of the scholars as well as the efforts from the part of the institution to develop their employability.

In addition to the above reasons, postgraduate research scholars, while collecting references to support their postgraduate research work, seminars and other subject related assignments might have utilized ICT tools and services, such exposure might have helped them to learn ICT related knowledge while using them. The findings are slightly in line with the finding noticed by Joshi et al. (2012), Christian and Chauhan (2010) and Christian et al. (2020).

Table 1: The level of knowledge of the postgraduate scholars of agricultural extension and communication about e-extension (n=120)

Sr. No	Knowledge about e-extension related components	Number	Percent
1	Very low (0-20 Percent)	00	00.00
2	Low (21-40 Percent)	01	00.80
3	Medium (41-60 Percent)	14	11.70
4	High (61-80 Percent)	24	20.00
5	Very high (81-100 Percent)	81	67.50

Factors affecting knowledge about e-extension amongst the postgraduate scholars of agricultural extension and communication

The result shown in Table 2 indicates the relationship between the personal, economic, social, communicational and psychological factors of the postgraduate scholars and their essential knowledge of e-extension components.

Personal factors

It can be seen that amongst the personal factors, the relationship of the personal factor of the postgraduate scholars like skill related to e-extension components was noticed positive significant with their knowledge about e-extension components. It means that knowledge on e-extension was observed better amongst those, who were more practically skilful in the application of e-extension components. It is natural that the ability to apply knowledge in practice in term of the skill of any system always helps an individual to know more and more about it using the principle of ‘learning by doing the system’. It can also be seen that other personal factors, viz. academic performance, the medium of education at the school level, native, father’s education and mother’s education were noticed non-significant with their knowledge about e-extension components. The result indirectly indicates that the postgraduates with irrespective levels of their

academic performance, local or English medium of education at the school level, rural or urban native and more or fewer parents' education, understood the almost high and very high level of significance in the development of knowledge about

e-extension considering its usefulness to make extension more users' friendly and faster. The findings are slightly in line with the finding noticed by Joshi et al. (2012) and Christian et al. (2020).

Table 2: Factors affecting knowledge about e-extension amongst the postgraduate scholars of agricultural extension and communication (n=120)

No.	Factors	Correlation Coefficient (r)
A Personal factors		
X ₁ Academic performance		0.029
X ₂ Medium of education at school level		-0.021
X ₃ Native of the scholar		0.104
X ₄ Father's education		0.001
X ₅ Mother's education		-0.01
X ₆ Skill of e-extension related components		0.564**
B Economic factors		
X ₇ Annual family income		0.075
X ₈ Family Occupation		-0.011
X ₉ Possession of e-extension tools		-0.038
C Situational and communication factors		
X ₁₀ Involvement in extracurricular activities		-0.057
X ₁₁ Library exposure		0.311**
X ₁₂ Information collection behaviour		0.202*
D Psychological factors		
X ₁₃ Job preference		0.291**
X ₁₄ Interpersonal communication		0.284**
X ₁₅ Innovativeness		0.226*
X ₁₆ Professional Zeal		-0.092
X ₁₇ Willingness to work in rural area		0.097
X ₁₈ Attitude towards internet exposure		-0.03
X ₁₉ Attitude towards e-extension employability		-0.119
X ₂₀ Attitude towards application of mobile in TOT		0.072
X ₂₁ Total experience of e-extension related components		0.479**
X ₂₂ Frequency of use of e-extension components		0.453**
X ₂₃ Training taken on e-extension enabled components		-0.088
X ₂₄ Purposes of use of e-extension components		0.441**

* Significant at 0.05 level of probability ** Significant at 0.01 level of probability

Economic factors

It can be observed from the results of Table 2 that the economic factors of the postgraduate scholars viz. annual family income, family occupation and possession of e-extension tools had a non-significant relationship with their level of knowledge about e-extension components. It shows that realization to possess necessary understanding regarding e-extension was felt identical amongst the scholars with more or less level of their annual family income, the involvement of the family in fewer or more occupations and ownership of more or fewer e-extension tools. This might be due to the great consciousness in the mind of every postgraduate about the high scope of e-extension in the process of transfer of technology. The findings are slightly in line with the finding

noticed by Christian and Chauhan (2010) and Christian et al. (2020).

Situational and communication factors

It can be seen from the results of Table 2 that the situational and communicational factors of the postgraduate scholars viz. library exposure and information collection behaviour were positive significant with their level of knowledge about e-extension components. The result reflects that the scholars who were more active in collecting and career and study related information keeping themselves active in library were more knowledgeable in e-extension, while their level of association with extracurricular activity did not motivate them significantly to develop more knowledgeable

in e-extension. Availability of cyberary and enormous amount of e-books and e-magazines in the library might have motivated the postgraduate scholars to acquire knowledge about e-extension related components.

Psychological factors

The result of the Table 2 discloses that the psychological factors of the postgraduate scholars viz. job preference, interpersonal communication, innovativeness, the total experience of e-extension related components, frequency of use of e-extension components and purposes of use of e-extension components were positively significant with their level of knowledge about e-extension related components. It is natural for that person with multidimensional interest to be a part of many agricultural jobs or professions, high level of direct operational experiences to use ICT tools and components with the frequent application for multipurpose applications will always have the multidimensional talent to learn and know things useful to make their future bright. This is what exactly observed here, thus e-extension knowledge was observed better amongst those scholars who were with concern and preference to be a part of many agricultural jobs, active in communicating with others, innovative in personality, highly experienced to use e-extension related systems, more frequent use of e-extension components for multipurpose applications.

The outcome of the Table also discloses that the postgraduates scholars with irrespective levels or degree of their professional zeal, willingness to work in the rural or urban area, irrespective positivity towards internet, e-extension employability and application of mobile in transfer farm technology were with comparable and high to the very high level of knowledge about e-extension components as a result of this, they were noticed non-significant with knowledge about e-extension components.

CONCLUSION

From the above discussion, it can be concluded that the majority (67.50 per cent) of the postgraduate scholars had a high level of knowledge about e-extension related

components, followed by 20.00 and 11.50 per cent of them were with above average and an average level of knowledge about e-extension related components. The level of knowledge about e-extension related components of the postgraduate scholars of SAUs of Gujarat state was observed higher amongst those who were highly skilful in using e-extension related components, more lively in the library exposure, high level of the tendency to gather information for academic and career-related tasks, multidimensional preferences to be associated with many agricultural jobs or professions, activeness in communicating effectively with others, more dynamic in personality to welcome innovative ways of living life, highly experienced with e-extension systems, active users of e-extension systems for multidimensional reasons.

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