



A Effectiveness and Opinion of Agri-Extension personnel about IT as an Extension Advisory Tool: a Case Study

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ABSTRACT

E-extension as a modern method of communication can be used to enhance the effectiveness and efficiency of extension services for agricultural sustainability. E-extension is the delivery of extension services using the internet and the latest information communication technologies (ICTs), which allow networking, online sharing, and collaboration. Agri-Extension personnel are a major factor in conducting an effective agricultural extension work plan; therefore, understanding extension personnel opinion towards the use of E-extension is important. So, the present investigation was conducted in CCS Haryana Agricultural University, Hisar. A total of 108 respondents (23 from main campus and 85 from outstation) were included in the sample of study. Primary data was collected using a self administered questionnaire and analyzed with the help of SPSS using descriptive statistics (Percentage, mean, rank order, standard deviation etc.). The results of the study revealed that internet has enhanced the practice of extension and personal contact adjudged as a most effective extension tool with a mean score of 4.19.

Keywords: E-extension, Agri-Extension personnel, Opinion, Internet, Effectiveness.

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INTRODUCTION

Predicaments arising from population facing declining food production pose enormous challenges for engaged in promoting food production. Agricultural extension services are under constant pressure to be responsive to ever-rising challenges of, and to show impact in, food production. The pressure in responsiveness is giving rise to calls for changes in the traditional public extension systems which are now seen as outdated, top-down, paternalistic, inflexible, subject to bureaucratic inefficiencies and therefore less able to deal with the dynamic demands of modern day agriculture [4]. There are even calls for re-examining the term 'extension' as it seems to re-enforce the thinking in terms of downward technology development and transfer (dissemination) processes.

In the current scenario of a rapidly changing world, E-extension have been acknowledged as an essential mechanism for delivering knowledge and advice as an input for modern farming and the role of Information Technology (IT) in actualizing so has drawn interest of practitioners [3]. The application of IT in the agriculture sector has increased rapidly across the world eg. Weather information systems, market information, insect-pest surveillance, internet, e-agriculture, agricultural information databases and other applications are used commonly in extension services [5-8].

Agri-Extension personnel play a key role in bridging the gap between scientific researches to the ultimate users [9, 10]. As far as opinion about IT tools is concerned, IT led extension tools are going to act as a key agent for changing agrarian situation and farmers' lives by improving access to information and sharing knowledge. There is an urgent need of IT tools in agricultural extension especially in the areas like; to increase knowledge resources, to facilitate better information access, to supplement inadequate technical manpower, for stronger research-extension-client system linkage, to develop efficient feedback

mechanism, for cost-effective extension delivery, to ensure gender equity in technology transfer process, to empower small and marginal farmers, to develop knowledge managers and to serve the farm stakeholders beyond technology transfer role.

MATERIAL AND METHODS

Outline of the study:

This paper is an outcome of the thesis entitled 'Impact of Internet on Extension Personnel for Farm Advisory Services' submitted in partial fulfillment of the award of M.Sc. at the CCS Haryana Agricultural University, Hisar. The study tried to focus on the use of internet in agricultural development and the possibilities of incorporating the internet in agricultural extension system.

Location:

The present study was conducted at CCS Haryana Agricultural University, Hisar, Haryana. University Directorate acts as bridge between the research scientists and the farmers and other beneficiaries to provide feedback, therefore, the role of the Directorate is twofold i.e. transfer of technologies from scientists to the ultimate clients through field functionaries and to find out the problems of the field to be passed on to various research departments for working on a solution to the problem.

Sample at a glance:

Haryana Agricultural University (HAU) Extension Personnel serving at Main Campus (Directorate of Extension Education, Associate Directorate (Training) and Agricultural Technology Information Centre) along with Extension Personnel from Outstations (all 19 KVKs) were taken as the sample of the study. The researcher collected the list of Extension Personnel from the official website of CCSHAU, which has been considered as the 'universe of the study'. The list was prepared with complete contact address, along with their e-mail addresses of all the respondents for contacting them personally and fixing time and date of interview. The total 23 Extension Personnel were available from Main Campus and 85 from Outstation. The total sample size is 108 respondents.

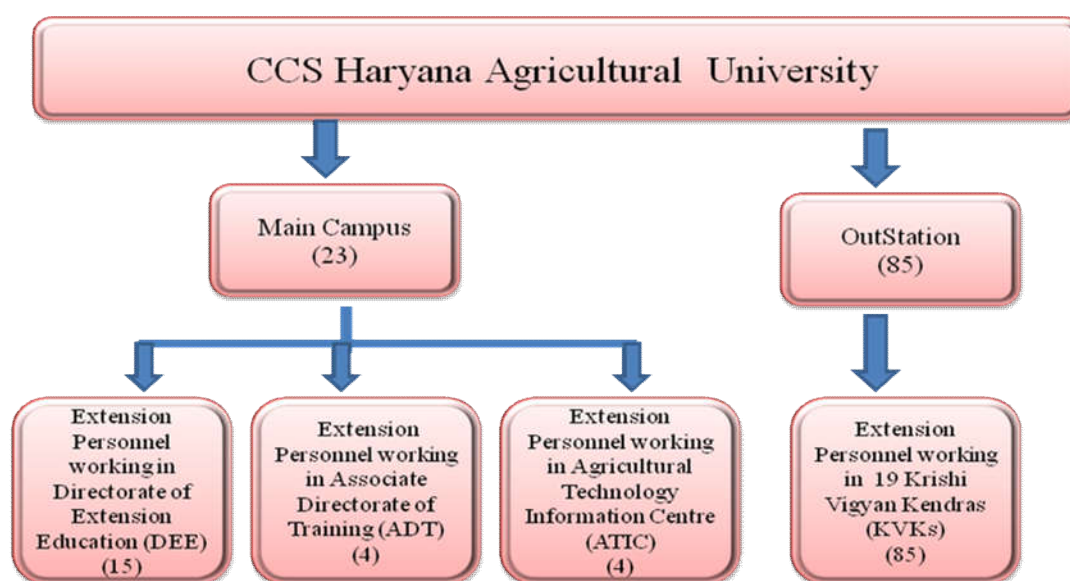


Fig 1 Criteria for selection of extension personnel

RESULTS AND DISCUSSION

Effectiveness of various extension tools in farm advisory services (FAS)

Table 1. depicts effectiveness of various extension tools. As in case of "Personal contact" 'very effective' got the 1st rank followed by 'somewhat effective', 'not effective' and 'uncertain'. In case of "Mass media as extension tool", 'effective' got the first rank followed by 'somewhat effective', 'very effective', 'not effective' and 'uncertain'. Similarly, in case of exposure visit, FLD/OFT, farmer's fairs and exhibitions and IT based extension; effective, very effective, somewhat effective and effective got the first rank, respectively. Among all of them, the "Personal contact" adjudged as a most effective extension tool with a mean score of 4.19. A similar study conducted by Agwu and Elizabeth[1] on "Access and Use of Information Communication Technologies by Women Staff of Public Extension Service in the North Central Zone of Nigeria" which illustrated that majority of the Women in Agriculture (WIA) staff had access to IT tools e.g. telephone, television and radio, respectively, very few of them had access to digital

ICT facilities (computer, internet and printer). Radio, video machine, television and telephone were used by the respondents to a large extent in reaching out to farmers. The aforementioned statistics are also represented diagrammatically in Fig.1.

Table 1: Effectiveness of various extension tools in FAS (N=108)

Effectiveness	N	%	Total Score	Rank order	Mean	St.dev.
A. Personal contact						
Very effective	57	52.77	285	I	4.19	1.09
Effective	29	26.85	116	II		
Somewhat effective	14	12.96	42	III		
Not effective	2	01.85	4	V		
Uncertain	6	05.55	6	IV		
B. Mass media						
Very effective	13	12.03	65	III	3.14	1.20
Effective	39	45.88	156	I		
Somewhat effective	24	22.22	72	II		
Not effective	15	13.88	30	IV		
Uncertain	17	15.74	17	V		
C. Exposure visits						
Very effective	20	18.51	100	II	3.22	1.37
Effective	34	31.48	136	I		
Somewhat effective	26	24.07	78	III		
Not effective	6	5.55	12	V		
Uncertain	22	20.37	22	IV		
D. FLD/OFT						
Very effective	47	43.51	235	I	3.91	1.43
Effective	29	26.85	116	II		
Somewhat effective	18	16.66	54	III		
Not effective	4	3.70	8	V		
Uncertain	10	9.25	10	IV		
E. Farmer's fairs and exhibitions						
Very effective	22	20.37	110	II	3.38	1.15
Effective	25	23.14	100	III		
Somewhat effective	44	40.74	132	I		
Not effective	7	6.48	14	IV		
Uncertain	10	9.25	10	V		
F. IT based extension (Cyber extension)						
Very effective	13	12.03	65	III	2.70	1.35
Effective	24	22.22	96	I		
Somewhat effective	13	12.03	39	IV		
Not effective	34	31.48	68	II		
Uncertain	24	22.22	24	V		

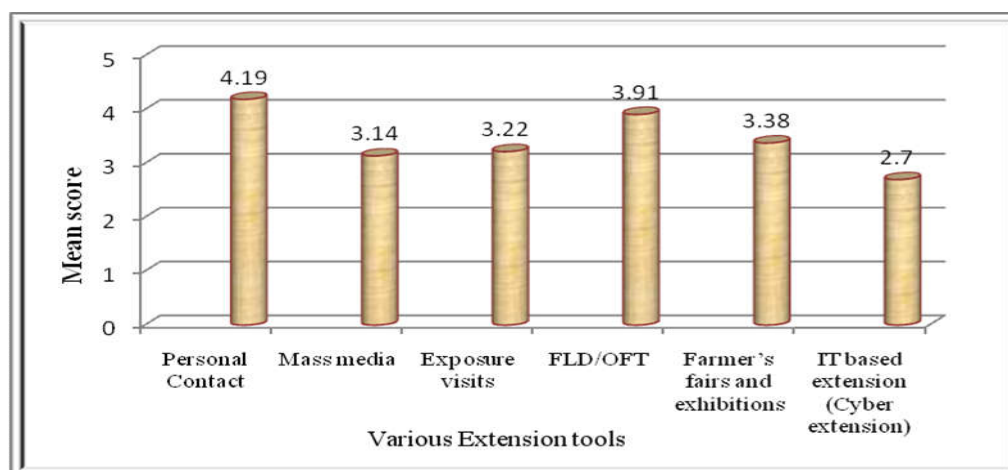


Figure. 2: Mean scores of various extension tools

Opinion of Agri- Extension personnel regarding IT based Statements

In the current IT based global scenario of agricultural extension, the opinion of the extension personnel was sought on the following statements:

Statement I : Internet has enhanced the practice of extension.

Statement II : Online and off- line extension are complementary to each other.

Statement III : Online and off-line extensions are in conflict with each other.

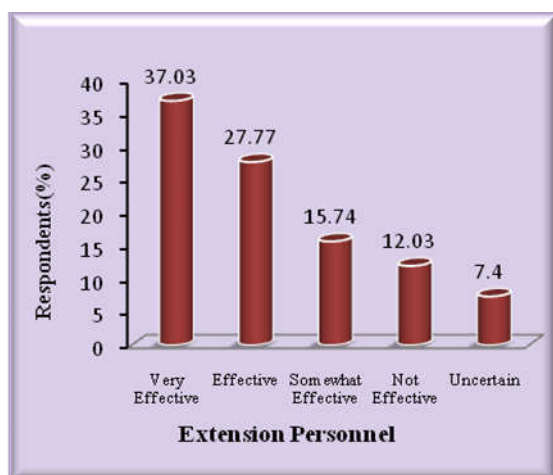
Statement IV : Online extension influences off-line extension.

Statement V : Off-line extension influences online extension.

In case of the above statements 'agree', 'uncertain', 'disagree', 'agree' and 'uncertain', got the first with their mean ranging from 2.25 to 3.28. Further analysis of data showed that online extension had an edge over the off-line extension in the current scenario. Seetharama and Ambuja [2] also observed in his study that information technology had made the management of information a relatively easier task thus helping improve quick and easy access to information. With the growing number of electronic sources of information it has become imperative for information professional to redefine the process of collection development. The aforementioned statistics are also represented diagrammatically in Fig 3 to 6.

Table 2. Opinion of extension personnel (N=108)

Response	N	%	Total score	Rank order	Mean	St.dev.
A. Internet has enhanced the practice of extension						
Strongly agree (1)	40	37.03	40	IV	2.25	1.27
Agree (2)	30	27.77	60	I		
Uncertain (3)	17	15.74	51	III		
Disagree (4)	13	12.03	52	II		
Strongly disagree (5)	8	7.40	40	IV		
B. Online extension and off-line extension are complementary to each other						
Strongly agree (1)	26	24.07	26	V	2.47	1.14
Agree (2)	31	28.70	62	III		
Uncertain (3)	30	27.77	90	I		
Disagree (4)	16	14.81	64	II		
Strongly disagree (5)	5	4.62	25	IV		
C. Online extension and off-line extension are in conflict with each other						
Strongly agree (1)	8	7.40	8	V	3.28	1.11
Agree (2)	16	14.81	32	IV		
Uncertain (3)	37	34.25	111	II		
Disagree (4)	31	28.70	124	I		
Strongly disagree (5)	16	14.81	80	III		
D. Online extension influences off-line extension						
Strongly agree (1)	20	18.51	20	V	2.60	1.24
Agree (2)	41	37.96	82	I		
Uncertain (3)	21	19.44	63	II		
Disagree (4)	14	12.96	56	IV		
Strongly disagree (5)	12	11.11	60	III		
E. Off-line extension influences online extension						
Strongly agree (1)	20	18.51	20	V	2.78	1.23
Agree (2)	23	21.29	46	IV		
Uncertain (3)	37	34.25	111	I		
Disagree (4)	16	14.81	64	II		
Strongly disagree (5)	12	11.11	60	III		



practice of Fig. 3. Internet has enhanced the extension

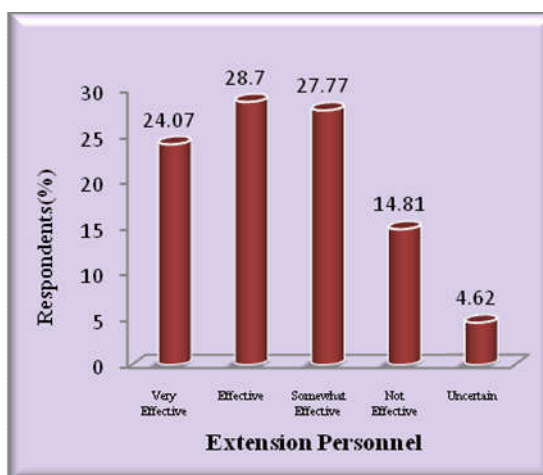


Fig. 4 Online and off-line/ traditional extension are complementary to each other

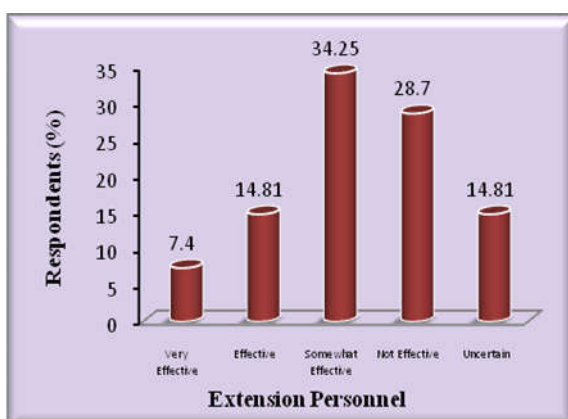


Fig. 5. Online/ Cyber extension and off-line/ traditional extension are in conflict with each other

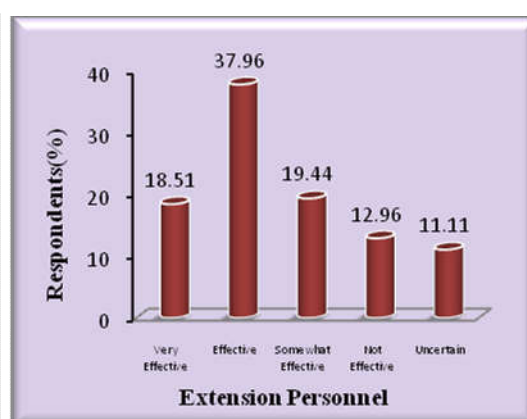


Fig. 6. Online /Cyber extension influences off-line /traditional extension

CONCLUSION

Future agricultural extension is likely to depend on online usage of information services along with traditional extension strategies. The blogs, social media, online forums and discussion and expert systems are fastly emerging as technology transfer tools which could further strengthen the hands of extension personnel, provided proper facilitation of internet utilization protocols. Thus, present study implies that online agricultural extension model can be used as an effective guide for e-governance, information sharing, transparency and addressing public grievance in speedy manner.

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