Perceived Attributes and E-Readiness of Extension Personnel to Use ICTs

Akanksha Singh [a*] and Meera Singh [a]

[a] Department of Home Science Extension and Communication Management, College of Community Science, Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur, Bihar, India.

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Original Research Article

ABSTRACT

ICT has become one of the cornerstones of modern culture. This is the age of the knowledge and communication technologies. Since we all agree that we are living in a digital age, the primary goal of the study is to examine how the Agriculture Coordinator and Kishan Salahkar using ICTs, for carrying out their job effectively and successfully, they must have high level of perception about perceived attributes of ICTs and e-readiness of ICTs. The Study carried out in Samastipur District of Bihar State. The interview schedule was the principal data collection method in the report, meanwhile frequency percentage and corelation coefficient are used as statistical tools for data analysis. On the basis of present study, it can be inferred that the respondent having very low level of e-readiness and also having high level of perceived attributes towards ICT. E-readiness is low because of lack of proper infrastructure facilities and training. To enhance the e-readiness and perceived attributes of ICT tools it is important to provide proper training and proper care and management of the use of ICTs.

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Corresponding author: Email: singhakku3216@gmail.com;

1. INTRODUCTION

The pace of the globe is pretty swift. Every element of life is changing, whether it is politics, society, or the economics. One of the biggest forces behind change is technology. Information is crucial for the development of technology. Information, which is a compilation of data gathered through various communication channels, is crucial to the Fast-growing generation. Technology simultaneously enables swift and quick information gathering [1,2].

Information Technology (IT) is a new field created by the fusion of information and technology. IT necessitates data processing on a network, which can be accomplished by employing the facilities, support infrastructures, hardware, software, and facilities to manage and distribute the knowledge. In recent years, IT has significantly transformed how we live our daily lives [2-4]. Information and communication technology (ICT) refers to the development and use of electronic and related devices for knowledge generation, recording, processing, storing, retrieval, and usage for quick and effective results. (Chaturvedi and Khares,2004)

Information and Communication Technology (ICT) in agriculture is an emerging field which focuses on improving agriculture and other activities Indian development. A Bottom-up recognition, demand-driven paradigm for technology creation, implementation, and evaluation refinement and transfer may occur from the extension of information and communication technology (ICT) in agriculture, according to Meera [5].

In a bottom-up, interactive communication system, Madukwe [6], documented the commitment of ICTs in agricultural extension to energize data collection, processing, and transmission, leading to a speedier spread of high-quality information to more farmers. Additionally, it was stated that a greater use of ICTs in agricultural extension will lessen access disparities between men and women.

Since we all agree that we are living in a digital age, the primary goal of the study is to examine how the Agriculture Coordinator and Kishan Salahkar, who is a different agriculture para-extension worker, use ICTs. To perform their roles effectively, the Agriculture Coordinator and Kishan Salahkar need to be aware of and proficient with ICT tools, which equips them with knowledge and speed when performing tasks in the workplace [7-13]. The way extension workers now use information and communication technology in agriculture is far from satisfactory. The essay critically sets to the following purpose in light of the aforementioned observations: To evaluate the perceived qualities and e-readiness of extension personnel with regard to using ICTs.

2. METHODS

The Bihar state's Samastipur district was chosen as the study's location. Agriculture coordinators and Kisan Salahkar specifically chose among 10 CD-blocks (about 50% of the total blocks) depending on their availability out of the district's 20 CD-blocks.100 interviewees were chosen for the study from a total of 10 blocks in the district. Kishan Salahkar, the agriculture coordinator, and the grass-roots extension team were picked at random. There were 26 agriculture coordinators out of 134 and 74 Kisan Salahkars out of 374(approximately 20 per cent Principle proportionate to probability). The report's primary technique of data collecting was an interview schedule. It was constructed with scientific goals in mind. The interview schedule was drawn up in Hindi. Interviews with Kishan Salahkar and the Agriculture Coordinator were used to acquire the information.

3. RESULTS AND DISCUSSION

3.1 Perceived Attributes of ICTs

There is an attempt to know the presumed qualities of ICTs, So the allocated categories are grouped into six groups: relative advantages, difficulty, dependability, trialability, observability, and predictability. Under Relative benefit, time savings, and no time restriction were identified as the most desirable characteristics of ICTs. 100% of respondents felt that time savings and no time restriction were key aspects of ICTs, followed by insightful (96%), economical (82%), meeting many users in a short period of time, no time limit, up to date (94%), easy-to-use (70%), and social recognition (80%). ICTs are beneficial technologies in terms of being economical, easy to use, rich in information, and time-saving, as demonstrated by their relative advantage. In the current investigation, the complexity of ICTs was determined using four indicators. The 100% respondents stated that managing ICTs requires skills, and that not having those abilities would prevent respondents from using and accepting them. ICTs were

perceived by most respondents as being challenging to use (78%), learn and treat (78%), and comprehend (54%). The implementation of an invention or technology will only occur when it is in harmony with the societal structure. Compatibility with characteristics such as physical, cultural, and language obstacles was investigated. According to the findings, there are no social hurdles (80%), cultural barriers (80%), or language barriers (50%) to adopting ICTs. The most crucial factor to consider when using ICTs is that the information created should be in the local language and personalised. The product's trialability was measured using two parameters. Respondents agreed that ICTs can be checked without purchasing (66%) and tried with ease (70%). This function is an excellent indicator of when ICTs are installed and used. The good outcomes and benefits of an innovation or technology increase its acceptance. The same holds true for information and communication technologies. The observability feature is a crucial parameter in the adoption of ICTs, along with correct information (88%). The final property of ICTs on Predictability was calculated. It is encouraging to find that respondents agreed on the predictability of ICTs in terms of impacts (88 percent), future demands (90 %), and outcomes (76 %). Thus, it might be inferred that ICTs possess all of the necessary characteristics of an invention, such as greater relative advantage, more social system compatibility, good observability, and sufficient trial.

3.2 Categorization of Responders Based on Perceived ICT Attributes

Fig. 1 shows the categorization of respondents based on perceived qualities of ICTs. The chart shows that the majority of respondents (70%) fell into the high category of perceived qualities, followed by the medium (20%) and the low (10%).
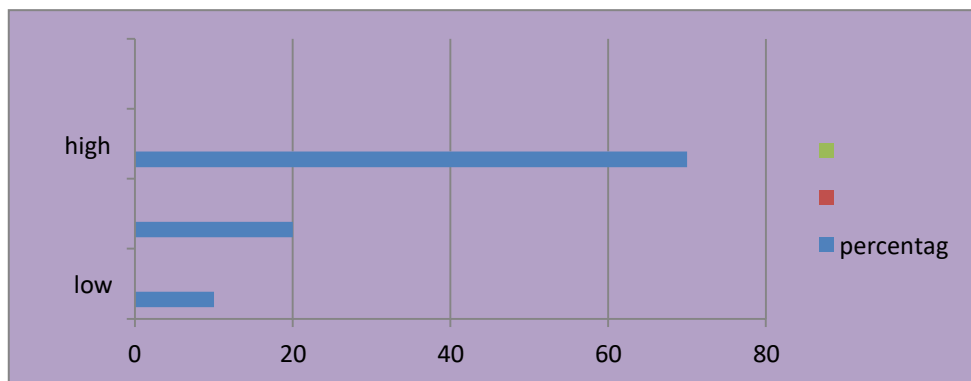

Fig. 1. Distribution of respondents as per categories of perceived attributes
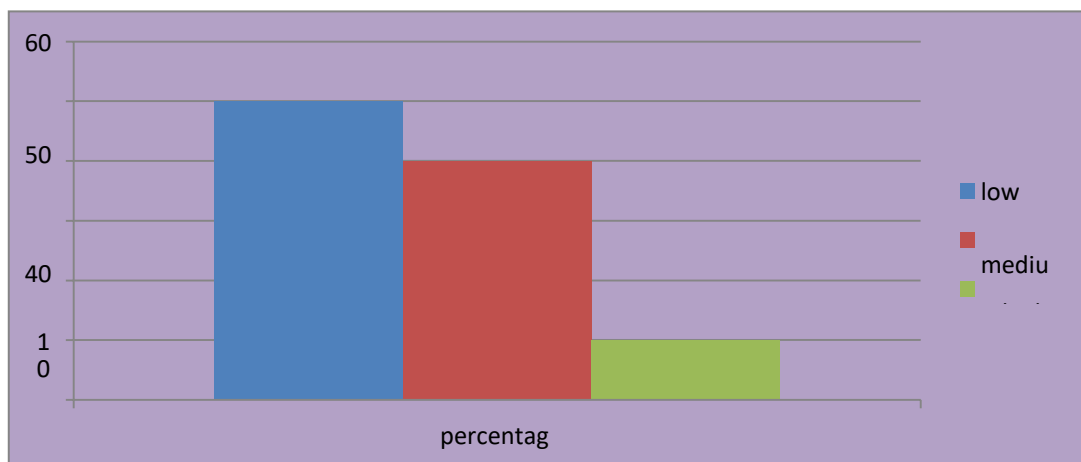

Fig. 2. Distribution of respondents as per category of e- readiness to use ICTs

3.3 E-readiness of the Respondents

Person e-readiness was divided into six categories to aid in comprehension: ICT availability, ICT usability, core ICT abilities, internet skills, digital literacy skills, and motivating elements. The fact that ICT availability is critical in the first place was carefully considered when designing these components. When something is available, accessibility is essential. To use technology effectively, one must have fundamental internet and software literacy skills, as well as availability and usability. Six components were selected to assess the respondents e-readiness since motivational variables with other physical components are also significant [14].

Respondent distribution based on e-readiness; Fig. 2 shows that most respondents (50%) are lowly e-read, followed by mediumly e-read (10%) and highly e-read (10%).

The table shows that the majority of respondents (80%) possessed cell phones with all of the necessary applications, followed by internet connectivity (40%) and personal PCs and laptops (20%). According to the table, 50% of respondents believed that each employee of their organization had access to ICTs, 40% had access to the usage of an official computer/laptop, and 45% believed that ICTs were used by other technicians. Once again, accessibility to existing ICTs paints a positive picture, and technical staff facility (45%) emphasizes the importance of timely training and upgrading extension staff knowledge for seamless work / operation. In terms of basic abilities, the table shows that the majority of extension staff (60%) could use MS Windows on their own, followed by preparedness to participate in online programmes (40%) and utilize modern ICTs (40%) to use computers and peripherals (30%). In terms of Internet skills, the table shows that approximately 65 % of respondents have working knowledge of social networking sites, followed by 60 % who know how to use e-mails properly and safely, and (40%) who have working knowledge of Internet Explorer. Approximately 40% of respondents have expertise of web technologies. Approximately (45%) of respondents said they knew how to use community mails, Google Docs and discussion boards, chat applications, and so on. 25 % of respondents stated they have experience with online surveys. In terms of software literacy, enthusiasm in learning through ICT courses (50 %) was followed by 40 % of respondents' ability to utilize multiple apps at the same time, knowledge of an Online Learning Management System (30%), and knowledge of file compression (25%). In terms of the motivational component of e-readiness, approximately 70% of respondents stated that because ICTs are fast, they can work despite online distractions (50%) and work without distractions at home and in the office (40%). Additionally, approximately 30% of respondents are confident that they can work with ICTs despite any physical or psychological distractions. The table clearly shows that availability was ranked highest, followed by internet capabilities, usability, motivational reasons, fundamental skills, and app literacy.

Table 1. E-Readiness of the respondents

S.No.	Statements	Frequency	Percentage	Mean score	Sub component rank	Overall rank
E-Readiness Availability						
1	Ability to use computer/Laptop without any other'sassistance.	20	20%		IIIrd	
2	Ability to use the internet properly indesktop.	40	40%	46.66	IInd	Ist
3	Ability to handle the smart phone for my work.	80	80%		Ist	
E -readiness Accessibility						
4	Accessibility of ICTs to every employee to utilize	40	40%		IIIrd	
5	Accessibility ofofficial computer/laptop toevery employee	50	50%	45.00	Ist	IIIrd

S.No.	Statements	Frequency	Percentage	Mean score	Sub component rank	Overall rank
6	Use of available ICTsonly by technicals	45	45%		IInd	
E –readiness basic ICTs skills						
7	Ability to use the computers and its peripherals	30	30%		IIIrd	
8	Ability to use MSwindows	60	60%		Ist	
9	Ready to participatein online programmes	40	40%		IInd	
10	Use of modern ICTs	40	40%	42.50	IInd	IVth
E –readinessInternet skill						
11	Knowledge of online technologies	40	40%		IVth	
12	Proper and safe use of the e-mail	60	60%		IInd	
13	Knowledge ofinternet explorer andcan use it	40	40%		IVth	
14	Working knowledgeof social networkingsites	65	65%	45.83	Ist	IInd
15	Knowledge of onlinesurveys	25	25%		Vth	
16	Knowledge of groupmails , online file sharing, discussion boards and chat tools etc	45	45%		IIIrd	
E –readiness Software Literacy						
17	Know the use of file compression or zip	25	25%	36.25	IVth	
18	Knowledge of usingseveral applicationsat same time	40	40%		IInd	Vth
19	Interest to learn more about ICTs proper courses	50	50%		Ist	
20	Knowledge of Online Learning Management System	30	30%		IIIrd	
E –readiness Motivational Factors						
21	Overcoming physical and psychologicaldistractions	30	30%		Vth	
22	Motivation to learn despitethe online distractions	50	50%	45	IVth	IIIrd
23	Demanding nature ofICTs	60	60%		IIIrd	
24	Speed of ICTs	70	70%		IInd	
25	Motivation to learnwithout distractionsat home or workplace	40	40%		Ist	
26	Motivation to learnwithout any formaltraining	20	20%		VIth	

3.4 Relationship between Independent Variables and E-Readiness of ICTs

To assess the association between the independent variable and the e-readiness of ICT extension personnel correlation coefficient was used . In the study it seen that owning ICT devices and getting an education are favorably and significantly associated with e-readiness.

Given that the variables of age, experience, and information source are negatively associated with the respondent's e-readiness. Gender, source of awareness, perceived qualities, nativity, and marital status are all positively connected with e-readiness, although only at 5percent. The variable possession of ICT gadgets is positively and substantially connected with e-readiness at a significance level of 5%, whereas the variable

education is favorably and strongly correlated with the respondent's e-readiness at a significance level of 1 %.

4. CONCLUSION

As a result, information and communication technologies emerge as very important instruments for enlargement of the agricultural sector. The productive use of networking and information technology not only will it boost the efficiency of extension workers at work but it would also benefit them nice in a shorter period. From the result it can be concluded that the respondent Having high level of perception about perceived attributes of ICTs. Majority of respondents belongs to low level of e- readiness of ICTs. As a result, the government must provide adequate infrastructure and other facilities to ensure the effective use of ICT instruments. To avoid this, careful care and management of ICT resources is required to address problems and improve the e-readiness of extension people.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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