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Attitude and Perception of Farmers Towards e-Learning

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ABSTRACT

e-Learning is a new concept to our agricultural system,where most of the farming communities have low access to the right information sources. It can contribute a lot through the provision of apt learning situation to officials, agriculture students as well as farmers and will dramatically improve agricultural education by allowing greater access to information. The study was undertaken in the Malappuram district of Kerala state to determine the attitude and perception of farmers towards e-learning. A group of sixty e-learners and sixty non e-learners was selected randomly to obtain significant information. It was found out that although the benefits of e-learning are many like easy access to information, time and cost effective, flexible; even then non e- learners had a negative attitude and unfavorable perception index towards e- learning.

Key words: e-Learning, attitude, perception, farmers

INTRODUCTION

Information and Communications Technologies (ICT) have facilitated learning and knowledge sharing, generated global information flows, empowered citizens and communities in ways that have redefined governance and have created significant wealth and economic growth resulting in a global information society. The new addition to the ICT world is the concept of e-learning especially to enhance distance education and it is defined as *instructional content or learning experiences delivered or enabled by electronic technology* (The Commission on Technology and Adult Learning, 2001).The benefits of utilisation of ICT as an e-Learning media for agricultural extension and training purposes are well documented (Hafkin&Odame 2002; Richardson, 2005). As e-learning grows and evolves, online learning allows individuals to manage their own learning. Some of the skills for becoming self-directed learners are the ability to work alone, persistence in learning, reading ability, competence in using the computer, word-processing skills and the ability to develop a plan for completing work (Piskurich, 2003). There are other factors like attitude and perception which also influence one's behavior towards e- learning.

A case study done at Bangkok University affirms that the intention of using e-learning was influenced by students' attitude towards computer and their perception of e-learning (Wangpipatwong, 2008). The individual situation in which a student may be, impacts on the attitudes and perceptions towards using a learning platform (Graff, Davies and McNorton, 2004; Alobiedat & Saraierh, 2010). Research by Edmunds et al., 2012, shows that usefulness and ease of use are key dimensions of students' attitudes towards technology; thus the students' attitudes are very much pragmatic and oriented towards effectiveness and flexibility between study, work and leisure. The research also draws the attention to the fact that students do not necessarily share teachers' perceptions of what is functional and that they "have clear requirements in terms of technology enabling them to produce more in the time they have, and enabling them to be more effective" Therefore evaluation of farmers attitude and perception towards e-learning is important so that it facilitate enablers to engage in designing, developing and implementing e-learning pathways that is best suited for the purpose of knowledge construction within e-learning educational programmes.

METHODOLOGY

The study was conducted in Malappuram district of Kerala state. A survey approach was used for the study. Farmers who were actively involved in e-learning and sixty farmers without e-learning formed a sample of one hundred and twenty respondents from three randomly selected blocks of this district. A Likert type scale was prepared to measure the attitude and perception of the farmers towards e-learning. Responses were scored on a 5-point continuum ranging from 5 = 'Strongly Agree' to 1 = 'Strongly Disagree'. The respondents were asked to rank

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the statements as per their view point. The perception index was also worked out using the formula

$$\text{Index on perception} = \frac{\text{Scores obtained by the individual}}{\text{Maximum score}} \times 100$$

For the analysis of data, descriptive statistics like frequency and percentage were used.

RESULTS AND DISCUSSION

Attitude of farmers towards e-learning

Majority of the non e- learner farmers (83.3%) strongly believed that the standard of learning would suffer with e- learning and 85 per cent of them thought that e- learning based education is not interesting and also it cannot provide better learning environment than that of traditional methods. The attitude of users of ICTs are important to their adoption. It can be drawn from the Table no. 1 that 83.3 per cent of non e-learners strongly disagreed that e- learning system could provide better comprehension than traditional extension method. About 85 per cent of non e- learners had a negative attitude towards e- learning as challenging method and did not want to adopt it.This finding is supported by Revenaugh (2000), the lack of acceptance of ICTs is a major barrier to ICTs adoption and use and Cullen (2001), Katz and Aspeden (1997), the negative attitudes towards ICTs, lack of confidence and self-esteem are the barrier to ICT adoption.

In contrast to the non e- learners, 51.7 per cent of e-learners felt that e- learning was a highly effective method to provide information. While 43.3 per cent of e- learners were unable to decide whether e-learning provided a better learning environment than traditional method because it was not providing any hands on experience which is very important in the case of agriculture. However, 51.7 per cent of the e- learners had the outlook that e- learning based education is more interesting and also enhances the quality of learning experiences. Among the e- learners about 55 per cent of them considered e-learning as challenging and was interested to use this facility as far as possible. Furthermore, 58 per cent of the e- learners strongly disagreed with the opinion that e-learning system would adversely affect social learning system.

Most of e- learner farmers had the feeling that the standard of learning would not suffer due to e-learning. They think that blended e- learning would be better. A majority of them felt that it was difficult to understand the information via e- learning mode than traditional extension method because the content was not presented in a style that facilitated easy comprehension. They also expressed that at times many technical words were used. In some case if exact vernacular words were substituted it would enhance the learning. The non e-learners also agreed along with the e- learners that it is not easy to adopt e-learning in the present context because of unavailability of the materials in the internet according to the need of the farmer. Hence information need assessment should be undertaken before designing the modules. The content also need to be relevant, covering the information needed by the farmer *i.e.* specific to the problem and location.

Table. 1: Comparative attitude of e-learner and non e-learner farmers

Statements	Frequency and % of Respondents (n_1=60) (n_2=60)									
	Strongly Disagree		Disagree		Not Decided		Agree		Strongly Agree	
	e-learner	*Non e-learner*	*e-learner*	*Non e-learner*	*e-learner*	*Non e-learner*	*e-learner*	*Non e-learner*	*e-learner*	*Non e-learner*
e-learning is effective in providing information	0 (0)	41 (68.3)	12 (20.0)	4 (6.7)	17 (28.3)	11 (18.3)	31 (51.7)	4 (6.7)	0 (0)	0 (0)
Standard of learning does not suffer with e-learning	0 (0)	50 (83.3)	0 (0)	6 (10.0)	21 (35.0)	4 (6.7)	22 (36.7)	0 (0)	17 (28.3)	0 (0)
It provides better learning environment	7 (11.7)	51 (85.0)	12 (20.0)	5 (8.3)	26 (43.3)	4 (6.7)	15 (25.0)	0 (0)	0 (0)	0 (0)
e-learning is more interesting	0 (0)	51 (85.0)	1 (1.7)	1 (1.7)	28 (46.7)	6 (10.0)	31 (51.7)	2 (2.3)	0 (0)	0 (0)
It enhances the quality of learning	0 (0)	48 (80)	0 (0)	6 (10)	30 (50)	5 (8.3)	29 (48.3)	1 (1.7)	1 (1.7)	0 (0)
The impact of e-learning is not sustainable	10 (16.7)	8 (13.3)	26 (43.3)	3 (5.0)	24 (40)	6 (10)	0 (0)	26 (43.3)	0 (0)	17 (28.3)
It facilitates better comprehen sion of knowledge	22 (36.7)	50 (83.3)	23 (38.3)	5 (8.3)	13 (21.7)	5 (8.3)	1 (1.7)	1 (1.7)	0 (0)	0 (0)
Learning using computer facility is cost effective and time saving	4 (6.7)	45 (75)	6 (10.0)	4 (6.7)	15 (25)	7 (11.7)	21 (35.0)	4 (6.7)	14 (23.3)	0 (0)
e-learning is challenging and I will use as far as possible	0 (0)	51 (85.0)	0 (0)	2 (3.3)	17 (28.3)	7 (11.7)	33 (55.0)	0 (0)	10 (16.7)	0 (0)

e-learning makes person lazy and slave to information gathering	9 (15)	10 (16.7)	35 (58.3)	6 (10.0)	16 (26.7)	21 (35.0)	0 (0)	19 (31.7)	0 (0)	4 (6.7)
e-learning is not easy to adopt in the present context Reliance on	0 (0)	0 (0)	0 (0)	0 (0)	22 (36.7)	6 (10.0)	38 (63.3)	24 (40.0)	0 (0)	30 (50.0)
e-learning will lead to knowledge divide in the society	32 (53.3)	7 (11.7)	28 (46.7)	4 (6.7)	0 (0)	4 (6.7)	0 (0)	25 (41.7)	0 (0)	20 (33.3)
e- learning system can be useful only for theoretical understanding	0 (0)	0 (0)	0 (0)	3 (5.0)	23 (38.3)	8 (13.3)	32 (53.2)	25 (41.7)	5 (8.3)	24 (40.0)
e- learning system will adversely affect social learning system	35 (58.3)	1 (1.7)	25 (41.7)	5 (8.3)	0 (0)	9 (15.0)	0 (0)	27 (45.0)	0 (0)	18 (30.0)

*Figures in parentheses indicates percentage

Perception of farmers about e-learning

The perception of the respondents about e-learning was uncovered using a set of eight statements .The results are presented in Table 2 and it can be gathered that, 83.3 per cent of non e- learners had unfavorable discernment regarding the use of e learning as a means to increase crop productivity and to adopt new technologies. About 75 per cent of non e- learners did not perceive e- learning as a useful tool for their farming. Bulk of the non e- learners (91.7 per cent) had cynical perception in relation to the use of e- learning as a means through which technologies can be more effectively delivered than traditional extension method. Also, 88.3 per cent of the non e- learner farmers strongly disagreed that it would be easy for their fellow farmers to use virtual learning environment. This skeptical perception of the non e- learners can be changed to an extend by exposing them to the process of e-learning, practicing it and also by the interaction with fellow e- learner farmers who have been benefited.

It was surprising to note that even 50 per cent of e-learners are still in a confused position to clearly state that e- learning has improved the quality of their knowledge. However, 38.5 per cent of them agreed that e- learning improved their quality of decision making. Decision making is very important for enhancing profitability. The e- learner farmers were able to make better decisions based on the market information provided and they also expressed their need for information on marketing. A majority of the e-learners believed that it was not e-learning alone which increased their crop productivity but also other factors like guidance of experts, contact with fellow farmers etc. However, 66.7 per cent of the e-learners believed that e-learning was useful for their farming and enabled them to apply technologies more effectively than through traditional methods. They trusted that it would be easier for them to use e- learning tools. But majority of them believed that it would be difficult for their fellow farmers to use virtual learning environment.

Table 2: Comparison of perception of farmers about e- learning (n_1=60) (n_2=60)

Statements	Frequency and Per cent of Respondents									
	Strongly Disagree		Disagree		Not Decided		Agree		Strongly Agree	
	e-learner	Non e-learner	e-learner	Non e-learner	e-learner	Non e-learner	e-learner	Non e-learner	e-learner	Non e-learner
e- learning can improve the quality of my knowledge	0 (0)	35 (58.3)	1 (1.7)	8 (13.3)	30 (50.0)	7 (11.7)	27 (45.0)	8 (13.3)	2 (3.3)	1 (1.7)
e- learning can improve the quality of decision	0 (0)	44 (73.3)	18 (30.0)	3 (5.0)	18 (30.0)	5 (8.3)	23 (38.3)	7 (11.7)	1 (1.7)	1 (1.7)
I believe that using e-learning can increase my crop productivity	23 (38.3)	50 (83.3)	23 (38.3)	5 (8.3)	12 (20.0)	4 (6.7)	2 (3.3)	1 (1.7)	0 (0)	0 (0)
I believe that e-learning is useful for my farming	0 (0)	45 (75)	0 (0)	5 (8.3)	14 (23.3)	7 (11.7)	40 (66.7)	3 (5.0)	6 (10.0)	0 (0)
I believe that e-learning enables me to adopt new technologies faster than traditional advisory services	0 (0)	50 (83.3)	0 (0)	3 (5.0)	11 (18.3)	7 (11.7)	40 (66.7)	0 (0)	9 (15.0)	0 (0)
With e-learning, I can apply technologies more effectively than through traditional extension methods	9 (15.0)	55 (91.7)	10 (16.7)	4 (6.7)	17 (28.3)	1 (1.7)	14 (23.3)	0 (0)	10 (16.7)	0 (0)
It is easy for me to use e- learning tools	0 (0)	43 (71.7)	0 (0)	2 (3.3)	15 (25)	9 (15.0)	34 (56.7)	6 (10.0)	11 (18.3)	0 (0)
I believe that my fellow farmers find it easy to use VLE	10 (16.7)	53 (88.3)	25 (41.7)	7 (11.7)	25 (41.7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

*Figures in parentheses indicates percentage
VLE Virtual Learning Environment

A perception index was also calculated for each individual and based on the scores obtained individuals were grouped into five categories. The categories of the e-learners and non e- learners based on their frequency and percentage analysis are given in the following Table3. Here, 78.3 per cent of the e-learners had favourable perception, whereas 16.7 per cent had somewhat favourable perception and the rest (5.0 per cent) belonged to the highly favourable group. In the case of non e-

learners, 81.7 per cent of them belonged to the unfavourable category, while 15.0 per cent to the somewhat favourable and 3.3 per cent to the favourable category. Presence of 3.3 per cent of non e-learners in the category of favourable perception is due to the fact that there were farmers who used computers but for non agricultural uses. They were interested to use it for agricultural purpose if problem based and location specific information was made available rather than general information.

Table 3: Comparison of perception index of e-learner and non e-learner farmers

n_1=60, n_2=60

Value	Category	e-learners		Non- e-learners	
		Frequency	Percent	Frequency	Percent
1 – 19	Highly Unfavourable	0	0	0	0
20 – 39	Unfavourable	0	0	49	81.7
40 – 59	Somewhat Favourable	10	16.7	9	15.0
60 – 79	Favourable	47	78.3	2	3.3
80 – 99	Highly Favourable	3	5.0	0	0
Total		60	100.0	60	100.0

CONCLUSION

Majority of e- learners believed that e- learning was useful for their farming and enabled them to apply technologies more efficiently than traditional methods. Non e- learners were characterized with low perception and negative attitude towards e- learning which points out a need for intervention covering these aspects for the success of e- learning initiatives.Hands on experience, proper motivation and also interaction with e- learner farmers will build the confidence level of non e- learner farmers and will help them to overcome their technophobia. Furthermore need based and relevant information must be provided and it should be made user friendly also. These factors may be exploited in devising strategies for promoting e- learning of agricultural technologies among farmers in the state.

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