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Survey on Professors and Students' Attitude about Virtual Learning in Iran Universities

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Abstract-Although virtual learning is seen as a desirable phenomenon and has been increasing rapidly among colleges in Iran but there are still few researches in this area. The goal of this study is to survey the attitude of professors and students in the Iranian colleges. For this purpose 95 and 161questioners were provided and sent to professors and students, respectively. Results show that professors have positive attitude to virtual learning as an effective instructional tool. For students results indicate that factors such as independency, guidance of professors and multimedia instruction are the most effective variables in using virtual learning. For both professors and students it has been noticed that self-sufficiency and self-acceptance are the most important factors of using virtual learning.

Key words- Attitude, Iran Universities, Multimedia Instruction, Virtual Learning

I. INTRODUCTION

Application of learning and instruction tools such as internet and information technology is increasing rapidly. Virtual learning is one of the most important learning environments today, so efforts and experiences in this area considered worldwide. Most of colleges in Iran are using this technology but effective extension of electronic instruction without considering attitude of professors and students will not be successful. It should be noted that virtual learning like traditional learning is considered as one of the ways of instruction and learning so these two concepts are completed. In other word, although the trend of using electronically instruction is increasing, it does not mean to ignore the classroom instruction.

II. THEORETICAL FRAMEWORK

Khan (2000) noted that virtual learning included learning based network, instruction based internet and advanced learning. In other definition, electronic learning is a kind of instructions that present through electronic media such as internet, intranet, extranet and hypertext (Govindasamy, 2002).

Thus, the definitions of electronically learning imply that users and learners are very wide although the literature of electronic learning is limited. Attitude of user in the way of using information technology is very important. A multidisciplinary approach is needed for survey of attitude to electronically learning {Liaw, 2002). User's attitude about virtual learning establishes a suitable environment for instruction. According to Liaw & Huang, (2003) attitude of users can be divided into feeling, cognitive and behavioural. Proposing the importance of electronically learning the purpose of this paper is measuring attitude of professors and students at colleges in Iran.

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In this survey, virtual learning means using internet technology for rapid transformation of information that increases performance and knowledge. Rosenberg (2001) believes electronic learning based on three criteria:

1) Electronically learning is a network that provides possibility of continued updating, saving and distribution of information.
2) Text of message through standard technology and using computer transform to users (learners).
3) Electronically learning can be used as instructional tool

in other words it can be used beside traditional ways.

Liaw (2004) suggests three concepts: characteristics of learners, structures, and interaction. In establishing and developing virtual learning, understanding of social needs is necessary. First characteristics of learners such as attitude, motivations, beliefs, and trust should be determined (2000, Passerini & Granger).Virtual learning also improves independent learning environment. Using multimedia tools for instruction lead to development of cognitive skills of learners. These skills include understanding important complex elements, ability of using concepts for reasoning and ability for using conceptual knowledge for new situation (Spiro, 1995). Finally virtual learning environment suggest group interaction. Group interaction is a kind of collaborative learning that helps learners to develop in the area they work. (Vygosky, 1978). Interacting learners with their professors and other learners increase their knowledge since learning occur in the context (Bruner, 1971). Thus, there are three basic considerations based on interaction learning criteria in electronically learning design: independent learning, multiple media environments and learning based on engagement of instructor. Many higher education institutions are organising and optimising electronically learning for effective learning (Govindasamy, 2002). Having positive attitude to virtual learning leads to more motivation (Liaw, 2000). Although attitude of users is an important factor in using and accepting internet technology, there is no comprehensive definition about attitude (Smith, 2002). In a research attitude divided into feeling, cognitive and behavioural. (Liaw, 2002).

Three-tier Technology (3-TUM) is a conceptual model for survey the attitude of users in information technology and internet (Liaw, 2004). This model comes from Technology Acceptance Model (Davis, 1989). According to this model person's attitude to information technology follow three tier including person's experience, affective or feeling and behavioural intent. In this research these two models has been used to find professors attitude about electronically learning.

Based on this model following hypotheses are proposed:

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III. HYPOTHSES

H1A: The quality of virtual learning has positive relation with the interest of professors to electronic learning environment.

H1B: The quality of virtual learning has positive relation with the self-sufficiency of professors to electronic learning environment.

H1C: The quality of virtual learning has positive relation with the self-acceptance of professors to electronic learning environment.

H1D: The interest of professors to virtual learning has positive relation with their intent of using electronic learning

H1E: Self-sufficiency of professors to virtual learning has positive relation with their intent for using of electronic learning.

H1F: Self-acceptance of professors to virtual learning has positive relation with their intent of using electronic learning.

H2A: Self-independent of learning indicates that virtual learning is an effective tool.

H2B: Guidance of professors in learning indicates that student's attitude to virtual learning is an effective learning tool.

H2C: Multimedia instruction indicates that student's attitude to virtual learning is an effective learning tool.

IV. METHODODOLOGY

For collecting data a questioner was used. The questioner includes three parts of population information, computers skills and attitude about virtual learning. Population information includes sex, field and courses taught. In computers skills repliers were requested to tell their skills about operation systems, internet, and word processor and power point. Six questions were in Likert scale. In this scale choosing 1 means no experience and selecting 7 indicate high experienced. For collecting data related to professor's attitude 19 questions were designed in Likert scale.

V. RESULT

A. Results of professor's attitude

In connection with using internet and ICT only 8 professors do not have experience and knowledge and 87 of them were familiar with virtual learning.

Table 1: descriptive statistics related to familiarity of professors with ICT

Variables	M	SD
Experience of using operation system	1.53	5.18
Experience of using internet	1.02	5.89
Experience of word processor	1.17	5.81
Experience of power point	1.21	5.80
Experience of using computer as instructional tool	1.98	4.32
Experience of using electronically learning	2.11	4.21

In table 2 the reliability rate of professors' attitude is presented. The reliability was approved with α=0.95 with a = 0/95. It indicates high reliability of questions.

Table 2: reliability rate of professor's attitude

Variables	M	SD	R
Self fulfilment	5.10	1.29	
When I use direct computer instruction I have feeling of confident	5.10	1.12	0.52
When I use internet I am confident	5.01	1.48	0.62
When I use electronically learning environment I am confident	5.20	1.29	0.48
Felling of interest	5.36	1.19	0.59
I enjoy using computer as instructional tool	5.31	1.13	
Using electronically learning environment for educational objectives	5.37	1.02	0.55
I enjoy using direct computer instruction	5.40	1.42	0.43
Usefulness	5.73	1.04	0.43
I believe that electronically learning environment increase learning	6.00	1.10	
I believe that electronically learning environment increase instruction	5.55	1.01	0.48
I believe that electronically learning environment useful for instruction	5.65	1.03	0.60
Using electronically learning intent	5.61	1.21	0.75
I intent to use electronically learning for learning	5.38	1.02	
I intent to use computer direct instructions	5.49	1.21	0.70
I intent to use internet for instruction	5.98	1.20	0.68
Happiness from system	5.68	1.09	0.76
I feel happy by using electronically learning environment	5.83	1.00	
Using power point & Ms-word I fell happy	5.43	1.02	0.82
I fell happy by using direct computer instruction	5.80	1.25	0.65
Multimedia instruction	5.90	1.60	0.86
I like sound media instruction	5.90	1.03	
I like picture media instruction	6.00	1.44	0.94
I like animation media instruction	5.88	1.99	0.70
I like colour text media instruction	5.85	1.21	0.77

Table3- Correlation criteria related to attitude of professors

Variables	2	3	4	5	6
Feeling of fulfilment	0.59	0.31	0.61	0.51	0.49
Feeling of interest		0.29	.53	0.51	.51
Feeling of usefulness			0.68	0.67	0.69
Using electronically learning				0.66	.70
Happiness from multimedia instruction					0.70

To find the relation between scales Pearson correlation test was used. Comparison between variables shows that there is significant relation among variables but correlation rate presented was lees than 0/80 in all cases. Correlations are significant at the p<0.01(2-tailed) for predictor.
Multiple regression analysis was also prepared. Results of stepwise Multiple Regressions are presented in Table four:

Table 4: Stepwise Multiple Regressions

Dependent Variable	Independent Variable	*B*	*R2*	P
Feeling of fulfilment	Happiness from system	0.60	0.21	0.001
Feeling of usefulness	Happiness from system	0.88	0.69	0.001
Feeling of interest	Multimedia instruction	0.59	0.28	0.000
Using electronically learning	Feeling of usefulness	0.55	0.48	0.002
	Feeling of fulfilment	0.31	0.19	0.000

Professors' attitude reliability coefficient of virtual learning is *a*=195 that indicates the reliability of questions is high. For finding the relation between the scales, Pearson correlations were used. Comparison between variables indicates that there is significant and correlated relation between variables but the correlation was less than 80 percent. Three regression analysis were used to examin hypotheses H1A, H1B, H1C, to show the effect of predictor variables (feeling of happiness from multimedia instruction) on feeling of Self-sufficiency, interest and usefulness of the virtual learning environment. Results show that independent relation variables of happiness can predict feeling of self-sufficiency (R=0/21, p<0/01, F (94) =10/24) and also feeling of usefulness (R=0/21, P<0/01, F (94.1). For examining hypotheses HIF, HID and HIE regression analysis was done to determine the effect of predictor variables on the intent of using learning environment. Results showed that independent variables of usefulness and self acceptance can predict willing of professors for using virtual learning (R=0.67, P<0/00,F(93,2)=39/25). In this case the feeling of usefulness have the most effect(R=48).

B. Results of student's attitude

Descriptive statistics related to the familiarity of students with internet and computer are presented in table five:

Table 5: Descriptive statistics related to the familiarity of students

Variables	M	SD
Experience of using web explorer	4.01	1.68
Experience of Email	5.40	1.41
Experience of using word processor	4.68	1.46
Experience of programming web page	2.80	1.28

Reliability of students' questioner about attitude of students to electronic learning was acceptable (*a*=0/92). The analysis are given in table 6.

Table 6: Means, Standard Division and correlation of questions

Questions and criteria	M	SD	R
Electronic learning as independent learning environment	4.70	1.46	
I can learn actively in electronic learning	4.22	1.09	0.53
I have many opportunities for establishing knowledge	4.99	1.22	0.62
Direct instruction hypertext can increase my learning motivation	4.08	1.23	0.56
I can actively discuss with others in electronic learning	4.95	1.41	0.40
I can read actively direct computer instruction	4.96	1.25	0.52
I can find actively information in electronic environment	5.01	1.14	0.51
Electronic learning as an effective learning environment	5.04	1.18	
Electronic learning environment enhance my thinking skills	4.99	1.24	0.52
Electronic learning environment enhance my problem solving skills	5.02	1.09	0.61
Electronic learning environment suggest different dimensions for problems solving	5.11	1.21	0.54
Electronic learning as multimedia instruction environment	5.32	1.29	
I like colour pictures in direct computer instruction	5.25	1.09	0.52
I like video instruction in direct computer instruction	5.31	1.36	0.55
I like direct computer instruction as animation	5.40	1.41	0.58
Professors as learners guide	3.62	1.20	
I like suggestions and helps of instructors in electronically learning	3.48	1.28	0.57
I like sound and picture of instructors in electronic learning environment	4.01	1.08	0.56
I like direct multimedia instruction in electronic learning environment	3.38	1.24	0.57

To find the relation between variables, multiple analysis regressions were applied and results are given in table 1.
Table 7: Analyzed of student's attitude

Electronic learning as effective learning environment		0.53	0.51
Electronic learning as multimedia instruction environment			0.49
Electronic learning as instruction environment based on guidance of instructors			
Correlations are significant at the p<0 01(2-tailed)			

Casual relation between variables into explain hypnotises H2B, H2A and H2C multiple regression was used. The results cab be seen in table 8.

Table 8: Regression results of Learners attitude

Dependent variables	Independent variables	*B*	*R2*	p
Electronic learning as effective learning environment	Electronic learning as dependent learning environment	0.29	O.35	0.000
	Electronic learning as multimedia instruction environment	0.18	0.08	0.000
	Electronic learning as learning environment based on professor's guidance	0.19	0.02	0.000

Regression analysis in order to find the effects of predictor variables on electronic learning as an effective learning environment was done. Results show that all three independent variables (electronic learning as independent learning environment, electronic learning as multimedia instruction environment, and electronic learning as environment learning based on guidance of professors) are important.

VI. CONCLUSION

The results show all hypotheses accepted. According to descriptive statistics table 1, professors have good experience in using computer and internet. Also they have knowledge and good experience in using instructional tools based on computer such as PowerPoint, computer instructional tools and experience in using electronic learning. The results show that professors and instructors have skills related to computer and electronic learning. In addition, according to table 2 professors have high positive attitudes to electronic learning. Four variables including self-sufficiency, interest, usefulness and intent of using electronic learning tools were used to find their attitudes. In Table 3 shows that six factors have high correlations.

According to table 4, satisfaction from educational system and multimedia instruction are basic factors in having positive view to electronic learning environment as an educational tool by the professors. Multimedia instruction is an important predictor for variable of interest. In addition, to understand intent of professors in using electronic environment feeling of usefulness with 56 percent and feeling of fulfilment with 21 percent have the most effects. From professors point of view satisfaction from the system can have positive effect on their attitude to electronic learning as instructional tools and multimedia can have significant effect on feeling of interest about electronic learning.

On the other hand, based on statistics in Table 5 learners have good experience in using computer. Students have better experience in using explorers and email than using word processors. This implies that students have good experience in using internet. Table 6 indicate that electronic learning environments are independent. Moreover students expect to be helped by professors when they use electronic learning environment. Also they believe that there are effective learning tools in electronic learning environments. Thus students have positive attitude to electronic learning. In Table 7 shows that four variables including independence, multimedia instruction, professors' guidance and effective learning have high correlation. In Table 8 shows that student's attitude to electronic learning as effective learning tool can predict positive relation through three electronic learning factors: independent learning environment, electronic learning as kind of multimedia instruction, and electronic learning as learning environment based on professors' guidance. According to statistics students have a good experience in using internet.. Clark (1994) noted that internet and multimedia certainly are educational issues but the amount of using them is dependent to attitude of professors and students.

Finally it should be notes that in this research only attitude of professors and students considered as one of the important factors. Designing the electronic learning environment including social culture, structure of educational system, and technical issue that may be studied in future research.

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