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Type students' versus academic staff' attitudes towards e-learning: A comparative study

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Abstract

In developed countries, universities have started e-learning. This phenomenon is a new issue in Iran. This research aimed to investigate students' and faculty members' attitude towards electronic learning in Birjand University of Medical Sciences. This is a descriptive-surveying study. Research population includes students and faculty members of Birjand University of Medical Sciences. Data were collected from 313 students and 86 faculty member through a researcher-made questionnaire. Reliability of this questionnaire was obtained 0.91 using alpha Cronbach coefficient. Field study was used to collect the data and the collected data were analysed by SPSS software. Both students and faculty members showed positive attitude towards e-learning. However, faculty members showed more positive view about e-learning ($p < 0.000$). Our findings showed that there is a significant difference among students' attitudes in different schools about e-learning ($p < 0.000$). Academic managers should provide requirements to develop e-learning in Iranian universities.

Keywords: E-learning, student, faculty members, attitude.

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1. Introduction

The advent of widespread communicative networks such as the internet, beside advanced tools and educational facilities, has changed and developed learning methods and made it possible to cover a wide range of learners and teachers from various parts, near and far, to take part in classes through virtual world, and fulfil the technical and scientific learning and teaching goals. This modern educational method, called electronic or virtual learning, is proposed as the most advanced educational method in today's world, and has used all types of cutting edge technologies such as internet networks, data bank, knowledge management, etc. In this type of learning, educational content is provided by electronic services (Jokar & Khase, 2007).

Electronic learning is mainly considered as a personal way of education in which learners are able to get their learning goals by their own talents. In this method, trainer and learner are usually physically far but communicate through electronic and technological instruments (Thiele, 2003). Since 1996, virtual education gained more attention in Iran and the national proposal for virtual education was proposed by the Ministry of Science, Research, and Technology and also was supported by great universities such as Sharif University of Technology (Naghavi & Ali, 2007). Now, many universities and higher education institutes have established virtual learning fields beside their regular majors and as a result, electronic learning found its place in the curriculum of many universities in Iran (Jokar & Khase, 2007).

The idea of virtual learning in medical schools is very new. As universities of medical sciences are separated from other universities which are under the umbrella of Ministry of Science, Research, and Technology, and thus these medical schools are far from technical and engineering majors, virtual education was neglected accordingly (Zare Bidaki, Sadrinia & Rajabpour Sanati, 2015). Whereas the importance of virtual learning is doubled in medical majors, for medicine is in direct relationship with human life and beside research and educational issues, accurate treatment of patients' needs new and updated information alongside modern methods. On the other hand, medical training will not be finished at university and will be continued during the professional life of medical practitioners. Moreover, as medicine students will travel all over the country to provide people with health care services, the need for virtual and electronic communication seems crucial. Using modern educational methods is so important that some educational scientists consider it more vital than having the scientific knowledge and the information of a specific major (Thiele, 2003; Zare Bidaki et al., 2015).

Flexibility of time and space, independent learning opportunities for people by different learning styles, cultures, talents, motivation, equal opportunity for learning and repeatability of education are all among the prominent features of electronic learning (Sedighpour & Mirzaei, 2002). Although it is obvious that electronic education methods have many benefits, successful implementation of it depends on the students' perception and professors' attitude towards e-learning. Asko believes that in e-learning, teachers are more of a facilitator of learning than controller of the class environment (Ascough, 2002). Valery states that teachers should play the role of a catalyst in learning and not a supervisor, as in virtual world of learning the roles of teacher and learner have changed (Volery, 2000).

Many researchers believe that attitude of teachers and students towards electronic learning has direct relationship with their familiarity with using this educational method (using electronic educational technology, ICT) (Bahadorani & Yamani, 2002). It means policy makers' outlook and the awareness of educational managers of universities from students' attitude will help them in providing the system with necessary planning and actions about virtual learning.

Therefore, this study aims to investigate the attitude of students and professors towards electronic learning. In this regard, we will look into the following situations:

- Investigating the attitudes of students in Birjand University of Medical Sciences towards e-learning.
- Investigating the attitudes of faculty member in Birjand University of Medical Sciences towards e-learning.
- Investigating the attitudes of students and faculty members towards e-learning regarding their gender.
- Investigating the attitude of faculty members in Birjand University of Medical Sciences towards e-learning in each school of the University.
- Comparing the attitudes of faculty members and students towards e-learning in the medical school of Birjand University of Medical Sciences.

2. Materials and methods

The present study was conducted in Birjand University of Medical Sciences in 2016 and based on a descriptive-surveying model. Researcher-made questionnaire are used in this study as data collection instrument about e-learning. This questionnaire contains 45 questions based on five-point Likert spectrum ranging from completely disagree with grade 1 to completely agree with grade 5. This questionnaire was evaluated and confirmed by five university professors and experts in this field in order to explore its content reliability. Validity of this questionnaire was obtained 0.91 by alpha Cronbach coefficient.

Statistical population of this research includes faculty members and students of Birjand University of Medical Sciences. A total of 104 faculty members participated in this study, and based on Morgan table, the sample volume was calculated as 86. All faculty members were studied by considering loss possibility and finally 75 of faculty members were investigated in this study. Population volume of students in this study was 1,600 people. Sample volume was determined 313 people by Morgan table and questionnaires were distributed and information was collected using stratified sampling method based on the schools of the University.

SPSS v.20 was used to analyse the data. Data analysis was done in two deductive and descriptive levels. In descriptive level, average, standard deviation, percentage and in deductive level, *t*-test of two independent groups and variance analysis were used.

3. Results

Distributed sample by gender separation among students and faculty members are shown in Table 1. Table 2 shows the results obtained from descriptive attitudes of students and faculty members about e-learning.

Results obtained from Table 2 show that the average of students' attitude towards e-learning in the range of 1–5 is 3.25 and the average attitude of faculty members is 3.75. The minimum attitude for students is 2.82 and the maximum is 4.18. In addition, the minimum attitude in group of faculty members in the range of 1–5 was 3.16 and the maximum one was 4.40. *t*-test of two independent groups was used in order to explore the significant difference in students' and faculty members' attitudes about e-learning. Table 3 shows the results of *t*-test.

Table 1. Demographic specifications of studied people*

Sample	Index	Faculty						Gender	
		I	II	III	IV	V	VI	Male	Female
Students	Number (members)	77	86	44	62	13	31	47	266
	Frequency percentage	24.6%	27.5%	14%	19.8%	4.1%	10%	15%	85%
Faculty members	Number (members)	43	10	13	8	0	0	46	21
	Frequency percentage	58.1%	13.5%	17.5%	10.8%	0	0	68.6%	31.3%

*I = medical and dentistry, II = paramedical, III = hygiene—midwifery and faculty of medical emergencies,
V = Ferdows paramedical, VI = Ghaen nursery and midwifery.

Table 2. Descriptive attitude indexes of students and faculty members about e-learning

Sample	Range	Average	Standard deviation	Minimum mark	Maximum mark
Students	1–5	3.25	0.1907	2.82	4.18
Faculty members	1–5	3.75	0.2827	3.16	4.40

Table 3. Comparing students' and faculty members' attitudes about e-learning

	No.	Average	Freedom degree	*t*-test	Significance level
Students	313	3.25			
Faculty members	73	3.75	384	−18.407	0.000

Table 4. Comparing average of students and faculty members attitudes about e-learning by gender separation

Sample	Gender	No.	Average	Freedom degree	*t*-test	Significance level
Students	Male	47	3.28	311	1.462	0.145
	Female	266	3.24			
Faculty members	Male	45	3.77	604	0.702	0.485
	Female	21	3.72			

Table 5. Comparing attitudes of students and faculty members about e-learning by faculty separation

Sample		Total squares	Freedom degree	Average squares	F statistics	Significance level
Students	Regression	1.742	5	0.348	11.129	0.000
	Residual	9.612	307	0.031		
	Total	11.354	312			
Faculty members	Regression	0.582	72	0.194	2.589	0.060
	Residual	5.174		0.075		
	Total	5.756				

Results of Table 3 shows the significant relationship between attitudes of students and faculty members about e-learning and faculty members in comparison to students have more positive attitude towards e-learning.

Tables 4 and 5 show difference in attitudes of students and faculty members about e-learning by gender separation and also show the obtained results from investigating the significance.

According to the obtained results from Table 4, there is no any significant relationship between the average of students' and faculty members' attitude and also male and female students and faculty members showed similar attitude towards e-learning.

Table 5 shows different amount in attitudes of students and faculty members about e-learning regarding different schools.

Results obtained from Table 5 show that there is no any significant difference between average attitudes of faculty members by faculty separation, while there is a significant difference between students' attitude by faculty separation. In addition, LSD *post-hoc* test was used to explore roots of differences in students' attitudes about e-learning by faculty separation and results show that there is no any significant difference between students' attitudes of medicine, dentistry, public health and Qaen higher education institute about e-learning and students of these schools have significantly higher attitude than students of Ferdows Nursery School.

4. Discussion

Clark (1994) notes that the interring of technology and mass media in educational system is inevitable and necessary but the use of technology depends on those who use it, and the positive attitude towards technology in general and e-learning in specific improves learning. Naghavi & Ali (2007) believe that before using modern technologies, it is necessary to explore the students' and professors' attitudes about them to provide an effective electronic learning system.

This finding is in agreement with similar studies performed in Tehran University (Alavi, 2009) and also studies of Berti (2009), Aldoub et al. (2006; 2007), Tamin Khandaghi et al. (2006), Mohammadi et al. (2006) and Rudsari et al. whose attitude towards e-learning was positive and similar but different from the results obtained by Riner (Sedighpour & Mirzaei, 2009).

Obtained results in this field are in agreement with the ones by Salari, Yaghmaei, Mehdizade, Vafadar and Afzali (2009) among students and also Zolfaghari, Sarmadi, Negarandeh, Zandi and Ahmadi (2009) among faculty members, but different from the studies of Latifnejad Roudsari, Jafari, Hosseini and Esfelani (2010) which were performance among students of University of Medical Sciences.

Results from investigating difference in students' and faculty members' attitudes in different schools also showed that although there is no significant difference between attitudes of students and faculty members about e-learning, students in different schools have different attitudes about e-learning and this may be related to the different nature of majors in different schools. Actually, it is assumed that the difference in the nature of medical and dentistry fields from nursery can be one factor of making difference in students' perception about e-learning. Accordingly, learning (Electronic etc.) will not be stopped in medicine and dentistry schools and will continue during professional activities. In addition, the importance of e-learning is more crucial for these students as they have more positive attitude and accordingly they can benefit more as they travel to different parts of the country to provide health care services.

Finally, the result of this study showed significant difference between attitudes of students and faculty members towards e-learning and faculty members had more positive attitude about e-learning. Many researchers believe that attitude type about e-learning have direct relationship with familiarity of learners with using and applying educational methods (e-learning technology, ICT, etc.) in class (Bahadorani & Yamani, 2002). In this regard, planning for and investing on students' learning seem necessary in using virtual methods of learning.

E-learning is one of the most attractive technologies in academic field in recent years which is quickly developing for its advantages such as high flexibility in training and easy accessibility, but this progress and specific e-learning abilities rely on the structure and accordingly the administrative organisations should provide supportive services. Therefore, it is necessary to pay more attention to structure, people and organisations of virtual universities and E-training centres and emphasise on technical infrastructures as these method of education may face with problem. It should be mentioned here that beside the change in attitude, e-learning needs prerequisites such as special regulations for faculty members which should be investigated in further studies. Also, holding classes with necessary electronic context is prioritised. Moreover, the use of e-learning alongside traditional methods (missed training) will promote the quality of education.

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