



## **E-LEARNING BARRIERS IN MEDICAL UNIVERSITY: STUDENTS' OPINIONS**

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### **ABSTRACT**

Electronic learning or E-Learning is one of the most important learning environments in the information age. So efforts and experiences related to this type of learning, have been widely considered in worldwide. In general, E-learning is a set of educational activities that carried out using electronic devices such as audio, video, virtual networks, and computers. This research aimed to identifying E-learning Barriers in

Zahedan University of Medical Sciences (ZAUMS). This descriptive cross-sectional study was performed on 900 students of ZAUMS that selected by a randomized sampling (available sample) method in spring 2018. The research tool was a research made questionnaire that its' content validity confirmed by several health information technology professors and its' reliability confirmed through a test-retest method (Cronbach's alpha = 0.87). Finally, the data were analyzed by SPSS.V16 software. From the perspective of the students, the e-learning environment is an independent learning environment. People feel satisfied with e-learning and e-learning is easy. Despite the easy use of this system, there are individual, organizational, managerial, technological barriers, and also there are lack of enough support for this system, lack of experienced human resources, and lack of the technology infrastructure in the ZAUMS. So, It is necessary to simultaneously provide the infrastructure, must to take some procedures in the field of explaining the necessity of e-learning, regarding the support necessary for the institutionalization of e-learning by high-level executives, increasing the motivation of learners, increasing the internet speed, and reducing the cost of updating educational content.

**KEYWORDS:** Barriers; E-Learning; Student; University.

## INTRODUCTION

Today, information technology (IT) with all its developments and effects in all fields of science, is one of the most essential tools in the field of education. The advent of technology and its development has led to the increasing production of science and also the ease of dissemination of it to all individuals. In this way, the guidance and organization of information has been taught from the main concerns of the educational managers, since formal education opportunities do not allow the transfer of information with past practice methods. Therefore, changing teaching methods, using IT in delivering lessons, and learning how to teach learners, is a basic methods of teaching in the Information Age. Thus, the use of IT, today, is one of the important issues of the educational circles in many countries [Salehpor & Mirzaei, 2008; keegan, 1993]. In general, electronic learning is referred to as a set of educational activities using electronic devices, such as audio, video, virtual networks, and computers. E-Learning is a system based on Information and Communication Technology such as hardware, software and computer networks, to create, maintain, develop and make educational materials for students that conducting educational activities and makes possible student assessment without the need for a place for learners and professors [Gholam Hosseini, 2008; Wallace, 1999].

Keegan stated that Distance Education is a planned educational system for organizing a learning process by an organization aimed at selecting and applying appropriate strategies for using new technologies in education, facilitating the two-way communication between teacher and student, providing background Independent learning and evaluation of the results by the learners themselves [Salehpor & Mirzaei, 2008; keegan, 1993]. As a result of the variety in using communication tools in education, virtual education encompasses a wide range. Virtual education actually focuses on the integration of the teaching environment and the teacher, the use of the new communication media, the intelligent design of the structure and the educational process based on the use of IT tools [Salehpor & Mirzaei, 2008; Montazer, 2005].

E-learning is one of the most important learning environments in the information age. So, efforts and experiences related to this type of learning have been widely considered worldwide. In Iran, most universities are making extensive use of this technology, although some of them have embraced distance education students, but the effective expansion of e-

education in the country, regardless of the users, students and professors' attitude to this technology, will be unsuccessful. It should be noted that e-learning, like traditional learning, is one of the ways of learning [Salehpor & Mirzaei, 2008; Khan, 2000]. It seems that the unique features of this educational method led to have a higher level in higher education. The timeliness and flexibility of this educational method, the ability to learn independently for different people with different learning styles, skills levels, motivational and cultures, and creating equal opportunities for the learning of all people are some of the features that can be utilized through the use of electronic tools in education [Quinn & Korry, 2002; Lee, 2002]. However, due to the emergence of this educational method in comparison with the traditional methods of teaching, its launch is in many cases along with some problems and limitations [Hawker, 2004; Downes, 2003; Hosseini et. al. 2007; Abedini & Farahi, 2009]. The type of the restrictions mentioned in the developed and developing countries, as well as large and small universities, is different [Abedini & Farahi, 2009; Jadah & Magalhaes, 2008]. At present, with the ineffectiveness of the current educational system in some countries, there are many barriers and Problems in the development of e-learning such as barriers related to comprehensive educational and planning policies, infrastructure, language, finance problems, and pedagogical, organizational and technological challenges [Bagheri Majd et. al., 2013; Jahangard, 2003; Razaghei, 2006]. Some other studies have pointed to the issue of social participation and the lack of social interaction between students and professors, also the time gap between students and professors, how to motivate students, the faculty members' inexperience in using teaching technology, and cultural challenges [Bagheri Majd et. al., 2013; Anstead et. al. 2004; Gulati, 2012; Saleamabadi, 2006]. Today, in higher education, there is no question of improving teaching methods, but rather about improving the learning process. Individual differences are in fact a barrier to the success of group education in schools and universities. The teacher, in order to solve this problem, needs to choose the appropriate tools according to individual needs and differences in student learning styles, and use it to teach and learn in a rational way. In other words, teacher should identify the individual characteristics of each student and for his/her needs prepare appropriate training strategies [Salehpor & Mirzaei, 2008; Jalali, 2002].

Mir Ali Seyed Taghavi (2010) concluded that faculties have a positive attitude towards e-learning as a teaching aid. In this regard, the feeling of usefulness and self-mastery of teachers was the most important factor in their desire to use e-learning. Salehpor and Mirzaei (2008) opined that those who aware in the field of virtual education, skill development is a

factor in their tendency to virtual education, while those who are not aware of virtual education, do not tend to focus on it. Statistics show that 58% of US universities in 1998 provided virtual courses for 2 and 4 years (and 84% in 2002), and it is expected that over the next 20 years, With more than 1,000 students, virtual classes will take the place of traditional classes [Mehrdad & Bahabadi, 2015; Muirhead, 2007]. The present study conducted to identify and help to remove barriers of e-learning in the ZAUMS.

## MATERIAL AND METHOD

This descriptive cross-sectional study was conducted on 900 students of ZAUMS that selected by a randomized sampling (available sample) method in the second half of 2018. The research tool was a research made questionnaire that its' content validity confirmed by several health information technology professors and its' reliability confirmed through a test-retest method (Cronbach's alpha = 0/87). Questions are based on Likert scale (from very low to very high). Finally, the collected data was analyzed by SPSS Ver.16 software and presented as tables and charts. Regarding ethical considerations, students were given a questionnaire with satisfaction from students. After completing them, they were received with appreciation them and the questionnaire was completed freely.

## RESULTS

Based on the results of this study, 88% of students were aged group 21-25 years old, 72% of them were female, 97% were bachelor students, and 80% of the students were single.

- ✓ In E-learning satisfaction rate, the mean of the responses were 2/8 (out of 4), which indicates that students are satisfied with the e-learning system. The highest average was related to "using e-learning is useful in my daily studies" with a mean of 3/14 (out of 4), which shows that students are totally satisfied and the lowest mean was related to "when I use direct computer training, I feel confident" With a mean of 2/62 (out of 4).
- ✓ Also, for the easy use of e-learning, the mean of 2/48 (out of 4) was obtained, and this average suggests that e-learning is easy to use by students. The highest average could be "others can help me in e-learning" with a mean of 3/64 (out of 4), and the lowest is "I have resources for using e-learning" with a mean of 2/45 (Out of 4).
- ✓ On the other hand, the intention of using e-learning in higher levels was 2/73 (out of 4), and this result indicates that the decision to use e-learning for students in higher level is good.

- ✓ The majority of students opined that the e-Learning environment is an independent learning environment (with a mean of 2/76 out of 4). Meanwhile, the "I believe that e-learning environments are helping to learn" is the highest mean (3 out of 4), and the lowest mean was "There are many opportunities to create knowledge in the e-learning environment" (with a mean of 2/49 out of 4).
- ✓ Also, the students agreed that the e-learning environment is an effective learning environment (a mean of 2/79 out of 4). Meanwhile, the "e-learning environment improves student intellectual skills" (with a mean of 2/83 out of 4) was the highest mean.
- ✓ The majority of ZAUMS students expressed that "the most important barriers to e-learning in order of importance are includes:
  - ❖ Administrative barriers" (with a mean of 3/9 out of 4),
  - ❖ Technological barriers (with a mean of 3/25 out of 4),
  - ❖ Organizational barriers (with a mean of 3/15 out of 4),
  - ❖ And Individual barriers (with a mean of 2/93 out of 4).
- ✓ Also "The lack of experienced managers to manage e-learning systems (with a mean of 3/11 out of 4), the high cost for updating educational content (with a mean of 3/31 out of 4), the lack of clarity of the educational standards necessary to evaluate professors and learners (with a mean of 3/2 out of 4), the low motivation of learners to use e-learning (a mean of 3/2 out of 4), Low internet connection speeds (with a mean of 3/33 out of 4), and disability of University Electronic Systems (with a mean of 3/2 out of 4) are barriers to e-learning in ZAUMS.

## DISCUSSION AND CONCLUSION

For many students their home will be the principal place of access to the Internet and the word *classroom* will assume a whole new meaning. From the review of the students' opinions in this study, it can be concluded that medical students feel satisfied with the e-learning system and its' implementation, but this can increase the sense of satisfaction by employing skilled IT professionals to educate more people (students and faculties). With regard to the managerial barriers to e-learning, these barriers can be reduced by attracting support and trust from managers and using experienced managers to manage e-learning systems. Finally, in the context of individual barriers to e-learning, these problems can be solved by motivating users, such as students and faculties, and introducing e-learning in the Medical Sciences Universities before setup and implementation. Ultimately, E-learning saves

Students and teachers a lot of time and it is a tool that if used well, is beneficial to both the faculties and the students in medical sciences universities.

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