Interdisciplinary Journal of Virtual Learning in Medical Sciences

Original Article

# Students' Experiences of E-Learning Challenges; a Phenomenological Study

Maryam Shafiei Sarvestani*, PhD; Mehdi Mohammadi, PhD; Jalil Afshin, MA; Laleh Raeisy, PhD Candidate

*Department of Educational Administration and Planning, Faculty of Education & Psychology, Shiraz University, Shiraz, Iran*

## ABSTRACT

**Background:** The emergence and use of e-learning in education have been one of the most important achievements of higher education which can solve many of the problems of this system, and addressing the challenges of e-learning are one of the concerns and problems of our society. The purpose of this study was to explore the students' experience of e-learning challenges at the Virtual School of Shiraz University of Medical Sciences (SUMS).

**Methods:** The research design was qualitative with the phenomenological method. Potential participants included students from Virtual School of SUMS. 10 students were selected using a purposive sampling method with a standard technique. The data collection method consisted of a semi-structured interview. After coding the data using thematic analysis method, basic, organizing, and inclusive themes were extracted.

**Results:** Results classified the challenges of e-learning at the Virtual School of SUMS into six general categories which are as follows: 13 educational challenges, including the extensive amount of context in the courses as well as a large number of modules, disregarding the educational prerequisites of the field, failure of professors to accompany students at the early stages of the projects, etc.; 10 organizational challenges including non-diversification of e-learning courses, high availability of online academic staff due to lack of e-learning experience, 9 ethical challenges such as lack of appropriate culture for applying this discipline, negative perception towards e-learning, 8 technical challenges including low speed of internet, shortage of physical spaces in e-learning, 5 supportive challenges such as lack of facilities, lack of permission to use the university canteen, 5 evaluation challenges such as mandatory in-person exams in e-learning courses, not allocating a reasonable proportion of the final mark to in-person exams, 3 managerial challenges such as inefficiency of the educational content, rejection of students by the head of virtual faculty due to lack of time and lastly, 2 communicational challenges such as lack of interaction with academic staff and classmates as well as lack of face-to-face communication.

**Conclusion:** Understanding the challenges and obstacles of establishing e-learning in Iran's higher education and providing practical solutions for them, developing this type of education and, as a result, the excellence of Iran's educational system.

**Keywords:** Students, E-learning, Experiences, Challenge

*Corresponding author:
Maryam Shafiei Sarvestani, PhD;
Department of Educational Administration & Planning, Faculty of Education & Psychology, Shiraz University, Shiraz, Iran.
**Tel:** +98 939 7991215
**Email:** maryam.shafiei@gmail.com

*Please cite this paper as:*
Shafiei Sarvestani M, Mohammadi M, Afshin J, Raeisy L. Students' Experiences of E-Learning Challenges; a Phenomenological Study. Interdiscip J Virtual Learn Med Sci. 2019;10(3):1-10. doi: 10.30476/IJVLMS.2019.45841.

Received: 13-05-2019
Revised: 11-09-2019
Accepted: 17-09-2019

## Introduction

Changes occurring in information technology have caused individuals, regardless of their geographical location, to learn beyond usual time and space restrictions through facilities specified by themselves. The advancement of technology has led to the emergence of using newer tools for transferring knowledge at the community level. Subsequently, the emergence of Internet and its development led to development of education which in turn, led to virtual learning being considered after distance learning. Over the last few years, virtual education has made significant progress all over the world. Our country is not an exception and certain topics have been raised, such as setting up virtual learning courses, virtual university formation, and electronic content production. The introduction of these new technologies into the field of education has changed the teaching and learning process (1). Due to these changes which are rapidly moving forward in learning and teaching environments, the implementation of virtual education has been proposed as a major need to provide new services and technologies in the field of teaching and learning (2). Therefore, the use of this new technology in teaching and learning has been suggested as an alternative or complementary to the traditional learning. Also, advancement of higher education with the help of these technologies has become one of the most important aspects in the management of virtual universities (3).

Virtual education provides the opportunity of learning for each individual at any time and creates a new paradigm (4). Due to its widespread application at higher education levels, e-learning has provided access to resources at any time and place for the majority of people in the community. Khan considers three characteristics of the e-learning system as flexibility, distribution in each location, and openness (5).

Despite all the benefits of using e-learning, its implementation will result in a series of problems in the educational system. In this way, the continuous separation of e-learning from the real environment will undoubtedly cause problems in the identity and personality of the learners. Lack of interaction in this type of space is one of the main constraints. Indeed, in this type of education, comprehensive and inclusive assistance is lost, and in some way, the principle of independence is questioned (6). On the other hand, (7) believe that e-learning will not be suitable for any type of education.

In a situation where our educational system cannot provide a ground for all students with low and high motivation, the implementation of e-learning as a new method may cause a series of issues which have been proposed as the main challenges of e-learning. It is, therefore, imperative and inevitable to identify and investigate these issues. Many studies have focused on these issues and other challenges faced by e-learning in different countries, including Iran. Results of these studies have categorized these challenges into a number of groups. Among these studies are (8) and (9) showing that despite the advantages of virtual education in the development of educational system, the implementation of this project at universities has always been accompanied by barriers and problems. The inadequacy of skilled and trained staff and lack of financial and physical resources to equip smart universities with computer systems and the required equipment are the main problems in the development of such universities. Moreover, results of studies conducted by (10) and (11) indicated that the most important issues and obstacles are the organizational structures within the educational system, the culture, the ability to use the tools and facilities, environmental conditions and more importantly, the public perception about this phenomenon.

To date, many studies have been conducted on e-learning. However, there is no research investigating the challenges from the students' point of view at the Virtual School of SUMS. Nevertheless, there are a few studies conducted on e-learning and its related challenges (1, 12-21) in some universities and higher education institutes, such as (22-25).

Given the above, this study aims to investigate the challenges of e-learning from the students' point of view at the Virtual School of SUMS. This is due to the fact that success of virtual education is based on the recognition of these challenges, since these challenges are closely related and ignoring one of them would affect the general path of e-learning process.

## Methods

**Research method**: Considering the general purpose of this research which investigates the experience of e-learning challenges by students at the Virtual School of SUMS, the research was carried out using a qualitative phenomenological-descriptive method.

**Potential participants and inclusion criteria:** Potential participants in this study include all the graduate students (master degree) of Virtual School of SUMS (N = 26) who have already completed their courses and are working on their thesis in the second year. The study included 26 students of the Virtual School of SUMS. Using purposive sampling approach to theoretically saturate the data, 10 of them were selected as key participants to explore the students' experience of e-learning challenges at the Virtual School of SUMS. The participants were selected on the basis of theoretical saturation. In other words, selection of participants continued until no new information was added to the previous information. Since participants in this study were the first students of the E-Learning Medical program, the inclusion criteria were set as being admitted in the first program and the participants' agreement to collaborate with this study.

**Data Collection:** Data was collected through a semi-structured interview with the participants. Accordingly, interviews were conducted with students of the Virtual School of SUMS who had sufficient experience of e-learning. The approximate time of each interview was 30 to 60 minutes. Overall, the interviews lasted about a month and a half, from May 2017 to the end of June 2017. The interviews were then written and prepared for analysis.

**Data analysis:** The analysis of the data obtained from the interviews was performed using the thematic analysis method. Accordingly, students who had sufficient experience of e-learning were interviewed. In the next step, interview notes for each interview were carefully studied to identify all independent ideas in the form of basic themes; then, a dedicated code was assigned to each of them as a marker. Next, based on all the basic themes identified in the entire research, a more general categorization was defined which led to the identification of organizing themes, and eventually these themes were categorized as inclusive themes.

**Data Validation:** In order to achieve the accuracy of the study, validity and reliability criteria were considered and used (26). To achieve this, data triangulation technique was applied. This is one of seven approaches to Qualitative Data Analysis Triangulation whose intention is to validate data derived from interviews using theoretical backgrounds and empirical research (42). The participants' comments, as well as the close and constant participation and interaction of them in the interpretation process, clarified the steps and processes to make it easier to understand and ensured the validity and accuracy of the study.

## Results

In this research, first the conducted interviews were analyzed and interpreted, and preliminary meaningful codes were extracted in the form of 42 basic themes. The codes and basic themes extracted from these groups were analyzed and initial semantic codes were extracted. In the second phase, by combining the sum of key themes in the same categories, eight organizing themes were identified that included educational challenges, management challenges, technological challenges, support challenges, communication design challenges, ethical challenges, evaluation challenges, and institutional or organizational challenges. Finally, these themes were included in SUMS as a comprehensive theme under the title of

"Challenges of E-Learning".

To validate this model, qualitative validation criteria such as acceptability (methods of alignment and self-reflection of the researcher) and reliability (method of accurate guidance of the interview and using the members of dissertation committee for evaluation and implementation of the interview program) were used. Moreover, the consistent results showed that the themes derived from the subject analysis method are consistent with the theoretical and research foundations. At this point, using the data alignment technique alongside previous theoretical and empirical evidence were aligned with the extracted themes of the educational challenges in the Virtual School of SUMS (Table 1). It should be noted that due to alignment of many theoretical foundations and research background with the themes

**Table 1:** Inclusive theme, organizing and basic concepts, accreditation and evidence of qualitative data of the research

| Theoretical Research | Basic themes | Organizing themes | Inclusive theme |
|---|---|---|---|
| (1, 12-14, 17, 25-32) | Extensive volume and number of modules<br>Lack of student support in the early stages of projects<br>Lessons should go forward in a more specialized way<br>The large number of resources<br>Lack of attention to educational prerequisites of this field<br>The high volume of marginal issues<br>Lack of training on basic e-learning<br>Too many assignments<br>Providing resources based on the interests of professors<br>Holding class hours based on interests<br>Limited Persian studies in this field<br>Large number of modules<br>High expectations of the professors | Pedagogy (educational) | The Challenges of E-Learning in SUMS |
| (12, 13, 21, 33, 34) | The inadequacy of most of the contents<br>Rejection of clients by the head of the center due to lack of time<br>Interference of working hours with class hours<br>There is little coordination in the management | Managerial | |
| (1, 12-14, 17, 21, 28-39) | Being frequently online because of the inexperience of the professors and lack of experience in handling offline files<br>Lack of specialized professors in this field<br>Limited number of e-learning courses<br>Lack of attention to the students' age range and concerns by the virtual education system<br>Lack of attention to students and their effort to earn points by some professors<br>Lack of experience of some of the professors in this field<br>The nascence of virtual courses<br>The system's strictness<br>Shortage of professors in some courses and asking a helping hand from the department of paramedics<br>Low quality of virtual courses | Organizational | |

| | | |
|---|---|---|
| (1, 4, 12, 13, 17, 21, 28-34, 38) | Slow Internet speed<br>Lack of physical space in virtual education<br>Lack of access to some off-campus data-bases<br>Lack of access to resources at the library<br>Lack of proper facilities in the courses<br>Lack of student user name and password for the internet<br>Lack of advanced equipment<br>Disconnections in the internal network | Infrastructural |
| (13, 14, 20, 25, 37) | In-person end of term examinations for the virtual education<br>Lack of awareness of the students' needs in this course and lack of understanding these needs by providers<br>Paying attention to educational prerequisites of the admitted students<br>Lack of focus on prerequisites that students must have before entering the program<br>Lack of attention to student feedback<br>Low number of low grade exams at the end of the semester | Assessment |
| (13, 14, 20, 21, 26, 27, 34, 37, 38, 40, 41) | Lack of mutual understanding between the student and the professor<br>Negative perceptions about virtual education<br>Lack of the culture<br>Lack of attention to cultural diversity in this field<br>Different expectations of students and professors<br>Stress and pressure on students<br>Mental problems and confusion of the students in the first semester<br>Conflict in priorities and increase of mental problems<br>Professors' lack of attention to the class and students | Moral |
| (1, 14, 19, 21, 25, 27, 28, 41) | Lack of welfare facilities<br>Inability to use the university's canteen<br>Lack of counseling space in the virtual education department<br>Students' Internet fee<br>High costs<br>High tuition fees | Support |
| (14, 19, 21, 25, 27, 28, 43) | Lack of professor-student interactions<br>No face-to-face communication | Communicational |

found in the qualitative analysis, the validity and reliability of the findings are confirmed.

## Discussion and Conclusion

The first challenge was the educational challenge. The findings of this research are confirmed by studies conducted by (21, 22, 35, 36). Accordingly, it can be said that SUMS faces educational issues regarding e-learning that should be addressed or improved. Educational issues may make challenges for students in analyzing the content, purpose, media, organizing learning materials and other educational materials and reduce their learning quality (35). This fact goes back to the same training challenges mentioned

above, including the lack of specialization in lessons and the lack of attention to educational prerequisites for students in this field.

The second challenge faced by students at the Virtual School of SUMS was organizational challenges. Findings of studies conducted by (20, 21, 35, 38) confirm this finding. These issues suggest a lack of attention to organizational issues as one of the important factors while prioritizing the factors affecting e-learning (35). This requires attention in the agenda of the university, since failure in eliminating them may hold the quality of these programs below the optimal level. Another part is the interference between the class and working hours which may undermine the nature of virtual education and entry conditions. Since one of the conditions for students admitted to these programs is having employment, this interference in hours will prevent their effective participation in online classes, and much more in off-line ones. It makes it impossible to study and work simultaneously. (38) also argued that this kind of challenge could overwhelm the acceptance of technology and make problems for e-learning programs.

The third challenge involved ethical issues. The related findings of our research were consistent with those of (19, 24, 38). Based on the results, it should be stated that the Virtual School of SUMS has failed in satisfying some of the e-learning needs of students in this field. These may include non-recognition of the Virtual Faculty's certificates by the recruitment tests that SUMS may face. This problem affects students who are concerned about the future of this type of higher education. Also, lack of attention of the system and professors to the cultural diversity indicated that SUMS has not been fully successful in addressing the cultural and localization factors which are the nature of e-learning (20). The nature of virtual education requires that individuals be able to participate in the programs in a more flexible way in terms of time, culture, geography and digital tools compared to in-person education. The fourth challenge faced by students at the virtual faculty of SUMS was technological (infrastructure). The concerning findings were consistent with those of (21, 41). Low bandwidth was one of the main infrastructural challenges at SUMS during the semester. This will lead to incomplete sessions and classes. Lack of advanced equipment expressed by students refers to software and hardware issues which is not well-suited for the virtual medical education. It also refers to library resources as well as the access to databases that indicate the need for more attention to the content management system (21). However, according to (42), not all the infrastructure and technology problems are related to equipment. In turn, absence of specialists and experts gives way to these issues. Therefore, it could be said that technological and infrastructural challenges reflect the need for a serious consideration of e-learning in the Virtual School of SUMS. Moreover, findings about the support challenges confirmed this results in the research conducted by (13, 20, 41). These findings indicate the inappropriate delivery of support services to participants. This, according to (41), may cause serious problems in setting up e-learning in Medical Sciences and change its distance-learning nature. (13) has also emphasized on them. This issue shows that making an appropriate and worthwhile environment for e-learning involves several factors, including support, which in the Virtual School of SUMS requires special attention as a prerequisite for successful completion of the program.

The sixth challenge, also called the evaluation challenges, was consistent with the findings of (27, 37). This demonstrates the lack of proportionality from the viewpoint of students at the Virtual School of SUMS and suggests that the organization and professors have not been able to apply the evaluation skills in the light of electronic evaluation culture. Similarly, (37) emphasize the importance of this point. The seventh challenge experienced by the students of the Virtual School of SUMS was the management

challenges which were consistent with studies done by (13, 21, 30, 33, 42). The existence of such challenges in the virtual education of the Virtual School of SUMS, based on the students' viewpoints, may cause problems for other parts of the virtual system as well. A part of this indicates lack of experienced directors to manage the e-learning system and allocate funds, which will in turn lead to weak support (42). Although this issue may also be due to nascence of the program in some cases, lack of effective support will make it harder for the development of virtual education at SUMS (21, 33).

Considering the fact that present study aimed at explaining the educational challenges of the Virtual School of SUMS, each different view and criticism will help recognizing other aspects of the problem and a deeper understanding of the subject. This will necessarily result in a greater recognition of the challenge and obstacles in deploying e-learning in Iran's educational system and will eventually develop e-learning in the said system. It is hoped that other scholars with new ideas regarding "E-learning Challenges" could move towards new horizons in this interdisciplinary field and explore the untapped areas that may enhance the educational system of Iran.

## Acknowledgement

We thank four 'anonymous' reviewers for their insights, although any errors are our own and should not tarnish the reputations of these esteemed people.

## Declarations

Ethics approval and participation satisfaction

In this study, the following ethical considerations are considered: After obtaining permission from SUMS officials, participants were contacted. After the needed coordination and assurance of the necessity of this research, the necessary information was collected through interviews. This also ensured that all information collected would remain confidential.

## Availability of data and materials

The data that support the findings of this study could be provided by the corresponding author on request.

## Authors' contributions

J.A. devised the study concept. M.S.S. designed the study and L.R. supervised the collected data. J.A. and M.M. analyzed the data. L.R. interpreted the findings and created the early draft. M.S.S. participated in coordination of the study and helped M.M. to critically revise the manuscript.

## Conflict of Interest

None declared.

## References

1 Jahini S. *Reviewing the Views of Faculty Members on the Issues of the Development of Virtual Education at Payam Noor University of West Azerbaijan Province.* Master's Degree in Educational Management. University of Tehran, Faculty of Humanities. 2012.

2 Parker, CD. *A Descriptive Study to Identify Deterrents to Participation in Employer-Provided E-Learning.* Dissertation of Ph.D. Capella University. 2004.

3 Sejzi AA, Aris B, Yahya N. The phenomenon of virtual university in new age: trends and changes. *Procedia-Social and Behavioral Sciences*. 2012;**8**;56:565-72. doi: 10.1016/j.sbspro.2012.09.689

4 Khan B H. The people-process-product continuum in e-learning: The e-learning P3 model. *Educational Technology-Saddle Brook Then Englewood Cliffs NJ.* 2004; **44**(5): 33-40.

5 Tang TS, Halani K, Sohal P, Bains P, Khan N. Do cultural and psychosocial factors contribute to diabetes risk? A look into Vancouver's South Asian community. Canadian Journal of Diabetes. 2019. doi: 10.1016/j.jcjd.2019.04.015

6 Islam N, Beer M, Slack F. (2015). Managing online presence in the E-learning environment: technological

support for academic staff. Journal of Education and Training Studies, **3**(3): 91-100. Doi: 10.11114/jets.v3i3.744

7 Talebian S, Mohammadi HM, Rezvanfar A.. Information and Communication Technology (ICT) in Higher Education: Advantages, Disadvantages, Conveniences and Limitations of Applying E-learning to Agricultural Students in Iran. Procedia - Social and Behavioral Sciences. 2014; **152**: 300-305. doi: 10.1016/j.sbspro.2014.09.199

8 Schroeder A, Minocha S, Schneider C. The strengths, weaknesses, opportunities and threats of using social software in higher and further education teaching and learning. Journal of Computer Assisted Learning. 2010;**26**(3):159-74. doi: 10.1111/j.1365-2729.2010.00347.x

9 Afzalkhani M, Ghods S. Evaluation of the Situation of Intelligent Secondary Schools Deployment in Semnan Province from the Viewpoint of Managers and Teachers. *Information Technology and Communication Technology Quarterly in Educational Sciences.* 2003;**2**(1):23-39.

10 Beckwith FJ. Public education, religious establishment, and the challenge of intelligent design. Notre Dame JL Ethics & Pub. Pol'y. 2003;17:461. doi: 10.5840/pc20035142

11 Sailor W. Making RTI work: How smart schools are reforming education through schoolwide response-to-intervention. John Wiley & Sons; 2009. doi: 10.1002/9781118269480

12 Volery T, Lord D. Critical success factors in online education. International journal of educational management. 2000 Sep 1;**14**(5):216-23. doi: 10.1108/09513540010344731

13 Khan B H. A framework for web-based learning. Web-based training. 2001: 75-98.

14 Govindasamy T. Successful implementation of e-learning: Pedagogical considerations. The internet and higher education. 2001;**4**(3-4):287-99. doi: 10.1016/s1096-7516(01)00071-9

15 Frydenberg J. Quality standards in eLearning: A matrix of analysis. The International Review of Research in Open and Distributed Learning. 2002;**3**(2). doi: 10.19173/irrodl.v3i2.109

16 Selim HM. Critical success factors for e-learning acceptance: Confirmatory factor models. computers & Education. 2007;**49**(2):396-413. doi: 10.1016/j.compedu.2005.09.004

17 Fresen JW. Quality assurance practice in online (web-supported) learning in higher education: An exploratory study (Doctoral dissertation, University of Pretoria).

18 Safavi AA. *E-Education from Idea to Practice*. Tehran: Researchers of Academic Publish. 2001.

19 Arkami A. *Investigating the Factors Affecting the Development of Virtual Education in Kurdistan University: Moving toward Planning for Conceptual Framework*. Master's Thesis for Educational Planning, Kurdistan University. 2003.

20 Darab B, Montazer GA. An eclectic model for assessing e-learning readiness in the Iranian universities. Computers & Education. 2011 Apr 1;**56**(3):900-10. doi: 10.1016/j.compedu.2010.11.002

21 Forsyth H, Pizzica J, Laxton R, Mahony MJ. Distance education in an era of eLearning: challenges and opportunities for a campus□focused institution. Higher Education Research & Development. 2010;**29**(1):15-28. doi: 10.1080/07294360903421350

22 The Institute for Higher Education Policy. "Quality ON the Line , *Benchmarks for Success in Internetbased Distance Education*. Washington. DC : IHEP. 2000.

23 Oxford Brookes University. *Institutional Self-Assessment Document*. 2016.

24 Thames Valley University (TVU). *A Review of Where We Are and a Proposed Development Plan for the Next Three Years*. 2007. [Online]. < http ://mingus.tvu.ac.uk/benchmark/>. Accessed Feb 7, 2017.

25 Illinois Online Network (ION) University

of Illinois. *A Tools to Assist in the Design Redesign, and /or Evaluation of Online Courses*. [Online] www.ion.uillinois.edu/>. Accessed Feb 7, 2017.
26 Ruiz JG, Candler C, Teasdale TA. Peer reviewing e-learning: opportunities, challenges, and solutions. Academic Medicine. 2007;**82**(5):503-7. doi: 10.1097/acm.0b013e31803ead94
27 Asghari M, Alizadeh M, Kazemi A, Safari H, Asghari F, BAGHERI AM, Heidarzadeh S. An investigation of the challenges of e-learning in medical sciences from the faculty members viewpoints of Tabriz university of medical sciences. doi: 10.29252/jarums.18.4.479
28 Rabiee A, Nazarian Z, Gharibshaeyan R. An explanation for internet use obstacles concerning e-learning in Iran. The International Review of Research in Open and Distributed Learning. 2013;**14**(3):361-76. doi: 10.19173/irrodl.v14i3.1412
29 Yaghoubi J, Malek Mohammadi I, Iravani H, Attaran M, Gheidi A. Virtual Students' Perceptions of e-Learning in Iran. Online Submission. 2008;**7**(3). doi: 10.1016/j.sbspro.2009.01.336
30 Mirzakhani M, Ashrafzadeh H, Ashrafzadeh A. The virtual university: Advantages and disadvantages. In2010 4th International Conference on Distance Learning and Education 2010:32-36. IEEE. doi: 10.1109/icdle.2010.5606048
31 Rana H, Lal M. E-learning: Issues and challenges. International Journal of Computer Applications. 2014;**97**(5). doi: 10.5120/17004-7154
32 Alberto A. Understanding Quality Culture in Assuring Learning at Higher Education Institutions. SSRN Electronic Journal [Internet]. Elsevier BV; 2015. doi: 10.2139/ssrn.2743128
33 Gregory S. Teaching Higher Education Students with Diverse Learning Outcomes in the Virtual World of Second Life®. Cutting-edge Technologies in Higher Education [Internet]. Emerald Group Publishing Limited; 2011;327–56. doi: 10.1108/s2044-9968(2011)0000004017
34 Mayer R, editor. The Cambridge Handbook of Multimedia Learning. Cambridge University Press; 2005. doi: 10.1017/cbo9780511816819
35 BASTANI P, AMINI M, NEJAD KT, ZADEH NS. Faculty members' viewpoints about the present and the ideal teacher evaluation system in Tehran University of Medical Sciences. Journal of Advances in Medical Education & Professionalism. 2013;**1**(4):140-7. doi: 10.18869/acadpub.rme.7.2.1
36 Gregory S. Teaching Higher Education Students with Diverse Learning Outcomes in the Virtual World of Second Life®. Cutting-edge Technologies in Higher Education [Internet]. Emerald Group Publishing Limited; 2011;327–56. doi: 10.1108/s2044-9968(2011)0000004017
37 Rice MF, Carter, Jr. RA. Online Teacher Work to Support Self-Regulation of Learning in Students with Disabilities at a Fully Online State Virtual School. Online Learning [Internet]. The Online Learning Consortium; 2016;**20**(4). doi: 10.24059/olj.v20i4.1054
38 Long KC. E-Learning, Information Technology, and Student Success in Higher Education. Oxford Research Encyclopedia of Business and Management [Internet]. Oxford University Press; 2017. doi: 10.1093/acrefore/9780190224851.013.78
39 Ashghali Farahani M, Arab Ameri Z, Hajibabaee F, Hosseini AF, Salehi T, et al. Educational management and emotional intelligence in undergraduate nursing students. Quarterly Journal of Nersing Management [Internet]. Armenian Green Publishing Co.; 2016;**5**(2):26–35. doi: 10.29252/ijnv.5.2.26
40 Makkizadeh F, Afshani A. Investigating the Factors Affecting the Intention to Use E-Learning from the Viewpoint of Higher Education Students. Interdisciplinary Journal of Virtual Learning in Medical Sciences [Internet]. Kowsar Medical Institute; 2019;In Press(In Press). doi:

10.5812/ijvlms.85806
41 Assareh A, Bidokht MH. Barriers to e-teaching and e-learning. Procedia Computer Science. 2011;**3**:791-5. doi: 10.1016/j.procs.2010.12.129
42 Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.
43 Dastjerdi NB. Factors Affecting ICT Adoption among Distance Education Students based on the Technology Acceptance Model—A Case Study at a Distance Education University in Iran. International Education Studies [Internet]. Canadian Center of Science and Education; 2016;**9**(2):73. doi: 10.5539/ies.v9n2p73