



Identification and Study of limiting Factors the Development of Virtual Courses in Hormozgan University

Ali Akbar Sheikhi Fini, Eghbal Zarei, Arsalan Ahmadi*

Hormozgan University, Bandar Abbas, Iran

* Corresponding author's Email: ahmadiarsalan89@gmail.com

ABSTRACT: The current study is aimed to identify and examine the factors limiting development of virtual courses in Hormozgan University by using survey method in 2012. The statistic population consists of all students of Hormozgan University of which 356 persons is selected as a sample with stratified random sampling. From researcher built questionnaire were used to collect data. To determine the validity, we utilize the judgments of experts and students attending in the field of information technology and e-learning; and the reliability of the questionnaire is equal to 0.82 by using Cronbach's Alpha and SPSS software package. Statistic data analysis are performed by using descriptive and inferential statistics. The results indicate that infrastructure and equipment factors, credit and financial factors, cultural factors, educational factors and human factors are over-effective in the establishing of virtual courses respectively.

Keywords: Virtual Courses; Virtual University; Limiting Factors; Hormozgan University

ORIGINAL ARTICLE

INTRODUCTION

Since the beginning of the history, human life to attain perfection and progress has been filled with many ups and downs. What is observed in recent years, suggests an upward growth and astounding scientific and educational transformation through information technology and increasing knowledge and awareness of human. With the advent of the World Wide Web, great changes have been occurred in all areas especially in education and learning. The emergence of the Internet has made it possible to break time and space constraints in Education and meet the concept Long Life Learning (Rezaei, 2009). Further, E-learning is a new paradigm and product of information technology. This type of education has a universal and effective impact on education across the world. It seems that the unique feature of this education method has led to a more exalted position in the higher education day to day. Flexibility of time and location of this method, independent learning opportunity for people with different learning styles and skill levels, creating equal opportunities for people to learn, and etc. are among those features which are provided by utilizing E-learning (Maroufi, 2003). On the one hand, the novel education method is welcomed very well by students which has also a significant effect on its expansion, as E-learning allows to provide the required knowledge in everyplace and fastest times well. However, E-learning is a new industry in the field of Instructional Technology and Distance Learning, despite all those facts, it is necessary for educational institutions and centers in Iran, particularly universities to take their best efforts into designing virtual learning environments based on

existing international standards in accordance with the pattern proportionate to educational and cultural structure of the country (Farhadi, 2005).

In this regard, some studies have been conducted which could be evaluated as follows. Feizi et al. (2004), in their study titled "Electronic Learning in Iran Problems and Solutions", studied Tehran University law students' perspectives in this field (sample: 40 students). The data analysis suggested that there are many major factors, including specific problems of communication platforms in Iran, lack of student access to computers and the Internet and stakeholders opposing growth in using e-learning, as well as lack of reasonable hardware costs which lead implementation and enforcement of e-learning to face some difficulties and major challenges in Iran. In another study, Yaghoubi (2009) evaluated the views of undergraduate and graduate students of Agriculture from Tarbiat Modares University and University of Shiraz about e-learning in Iran (sample: 82 students).

His research results indicate that lack of appropriate software and hardware facilities, slow Internet speed, reducing social and cultural interactions between students and professors, university faculty unprepared for and students with weak computer and Internet skills are among major issues and problems of e-learning in Iran. The results of Abdolahi (2010) indicate that there are some significant concerns about existing difficulties and problems of development of e-learning in universities, such as concerns about the failure to provide the necessary equipment's (hardware, software and bandwidth), reducing quality of education, professors lack

sufficient knowledge about e-learning, professors who concern about unexpected risks for future of their reputation and professional career, and not granting rewards and incentives for professors to participate in virtual education practices. Berge (1998) studied barriers for e-learning in higher education from the perspective of professors and university graduates (sample: 812 individuals). His research results indicated that resistance to change, lack of technical support, lack of awareness of new technologies and high hardware costs are among virtual education difficulties.

Bagheri Majd (2010) studied the barriers to development of virtual education at the University of Ahvaz. His data analysis suggests that low-speed internet, lack of appropriate hardware and software, lack of skilled human resources for management system, students' low proficiency in English, and students with low ability to do individual activities in this field are the most important issues against the development of virtual education. Wilson et al. (2004) suggested Internet access costs as the problem of development of virtual education.

This study is aim to identify and examine the factors limiting development of virtual education, as well as finding appropriate strategies to solve them, by using survey – descriptive method of research.

Research questions:

1. How much technical factors and equipment are limiting the establishment of virtual courses?
2. How much credit and financial factors are limiting the establishment of virtual courses?
3. How much educational factors are limiting the establishment of virtual courses?
4. How much cultural factors are limiting the establishment of virtual courses?
5. How much human factors are limiting the establishment of virtual courses?

MATERIALS AND METHODS

The current study is applied based on its purpose and nature of the research and is descriptive according to method for data collection. The statistic population consists of students of Hormozgan University in academic year 2011-12 of which 356 persons is selected as a sample with stratified random sampling. The questionnaire with 34 items is used to

collect data. Items are related to 5 factors, including infrastructure and equipment, credit and financial, educational, cultural and human factors, which each has its own sub-items as 5-choice items that are rated based on Likert scale. To determine the validity, we utilize the judgments of experts and students attending in the field of information technology and e-learning; and the reliability of the questionnaire is equal to 0.82 by using Cronbach's Alpha and SPSS software package.

Data analysis is performed using descriptive statistics (mean, standard deviation and mean deviation error) and inferential statistics (single group T-test, independent groups T-test).

RESULTS

As shown in Table 1, 204 out of sample is female which is 57% and remaining (152) is male which 43% is. In addition, among participating students, 77 out of 356 are graduate students (about 32%) and remaining (279) is under graduate students (about 78%).

Question 1: What are factors limiting the establishment of virtual courses in Hormozgan University? As presented in Table 2, according to the given degree of freedom = 355 and significant level = 0.05 in t-test, the calculated t-value is greater than t-value of table (1.64), thus it is concluded that according to the students, all above factors are over-effective on the establishment of virtual courses.

Question 2: Is there any significant difference between male and female in relation to limiting factors? As illustrated in Table 3, with two-tail t-test as well as significant level 0.05 and degree of freedom 354, the calculated t-value is smaller than t-value of table (1.96), thus null hypothesis is not rejected and concluded that there is no significant relationship between male and female students.

Table 1. Sample characteristics according to gender and education level

Variable	Option	Frequency	Frequency (%)
Gender	Female	204	57
	Male	152	43
Education Level	Graduate	77	22
	Under Graduate	279	78

Table 2. One group t-test for examining the significant level of factors limiting the establishment of virtual courses

Limiting Factor	N	Mean	Theoretical Mean	SD	DF	T	Sig.
Infrastructure and Equipment	356	3.86	3	0.048	355	17.91	0.000
Credit and Financial	356	3.80	3	0.050	355	16	0.000
Cultural	356	3.61	3	0.053	355	11.51	0.000
Educational	356	3.52	3	0.051	355	10.20	0.000
Human	356	3.52	3	0.052	355	10	0.000

Table 3. T-test results for independent groups according to means comparison of male and female students

Gender	N	Mean	SD	T-value	Sig.
Male	152	3.63	0.97	-0.731	0.461
Female	204	3.69	0.92		

DISCUSSION

In today's fast-paced world, e-learning as a knowledge acquisition tool is rapidly expand and developed. Such growing trend requires those who involve, to apply scientific and logic method in operating, assessing, and managing-learning projects. However, E- learning is a new industry in the field of Instructional Technology and Distance Learning; despite the fact that this type of education and utilizing modern media like the internet and computers have created a golden opportunity for individuals, barriers and difficulties make it impossible (Rezaei Rad, 2011). And also serious challenges are faced by administrators, professors and other educational design experts in relation to this type of technology. It is attempted to identify and examine the faced limitations and difficulties. The research results indicate that on average, students views about the limiting factors, including infrastructure and equipment, credit and financial, cultural, educational and human factors for virtual courses are higher than average.

Among the infrastructure and equipment factors, low bandwidth (slow internet speed) with a mean of 4.14 and uncertainty in relation to permanent connection to the Internet with a mean of 4.10 have the greatest effect. These findings are consistent with results of Yaghoubi (2009), Hosseini Lorgani (2007), Murphy et al. (2000) and Grant (2004). Among the credit and financial factors, lack of investments and credits needed for virtual education with a mean of 4 and rare incentives for e-education with a mean of 3.89 both are among the most restrictive factors. These results are in agreement with studies conducted by Rezaei (2009), Murphy et al. (2000), Wilson et al. (2004) and Berge (1998). Among cultural factors, the low of credibility of such university degree for entrepreneurs and the public with a mean of 3.70 and not institutionalized culture of using technology in the country with mean of 3.66 are in the first and second priorities, respectively.

They are consistent with studies done by Feizi et al. (2003), Rezaei (2009) and Hosseini Lorgani (2007). Among the educational factors, Laboratory courses running virtually impossible with a mean of 3.82 and low level of proficiency in English of students with a mean of 3.80 have the greatest effect. These finding are in complete agreement with results of Abdulrahman et al. (2011), Bagheri Majd (2010), Yaghoubi (2009), and Abdolahi (2010). Among the

human factors, the lack of experienced managers to manage virtual education systems with a mean of 3.96, and the inadequacy of scientific experts in the field of IT training with a mean of 3.74 are of the most important issues in this field. They are in accordance with the results of studies conducted by Abdolahi (2010), Berge (1998) and Bagheri Majd (2010).

In general, the results indicate that for the successful implementation and deployment of virtual courses, it is necessary to equip and develop telecom infrastructures and universities with the appropriate hardware and software facilities. On the other hand, financial support and allocation of special funds for initial start-up of such courses a serious need. Among other requirements to establish and develop virtual courses, it is essential to make a change in the traditional attitude of scientific community of the country towards virtual education, e-learning as well as creating a proper culture. Thus, in order to start successful virtual courses, its hold al so be noted that all the factors must be considered. Without a coherent and holistic approach, we cannot hope to establish and develop successful virtual education.

REFERENCES

Abdolahi, A. (2010), Adaptive study of the views of professors and executives about major barriers of participating professors in virtual courses, *Journal of Educational Technology*, 4

Abdulrahman. M. & Mohammed -Abdulkareem (2011). Models of e-learning adopted in the Middle East. Available at: www.ksu.edu.sa

Bagheri Majd, R. (2010) Barriers of development of virtual education in Ahvaz University, M.S. Thesis, Ahvaz University, Educational Science School

Berge Z.L. (1998). Barriers to online teaching in postsecondary institutions: Can policy changes fixit. *Journal of west Georgia University*, 12, 8.

Farhadi, R. (2005). E-learning: New paradigm in information era, *IT Magazine*, Year 21st, No. 1

Feizi, K. & Rahmani, M. (2004). E-learning in Iran: Problems and Strategies, with an emphasize on higher education, *Research and Planning in Higher Education Magazine*, 3, 3.

Grant, M. (2004). Five key barriers facing organizations in e learning. Available at: www.elearncampus.com

Hosseini Lorgani, M. (2007). Study of the barriers of development of e-learning in educational system

- of Iran, Management and Planning in Education System Magazine, 1.
- Maroufi, M. (2003). The effect of e-learning on learners, learning in Medical Sciences Magazine, 10.
- Murphy, T.P. & Dooley, K.E. (2000). Perceived strengths, weakness opportunities and threats impacting the diffusion of distance education technologies in a college of agriculture and soil sciences", Journal of agricultural education, 41.
- Rezaei, M. (2009). Study of issues and problems against development of virtual education in Agriculture higher education from faculty point of view, Higher Education in Iran Management.
- Rezaei Rad, M. (2011). Study of effective factors on resource and process management of e-learning, New Thoughts in Educational Science Magazine, Year 6th, 2.
- Yaghoubi, J. (2009). Assessment of agricultural extension and education graduate students' perceptions of e-learning in Iran. Procedia Social and Behavioral Sciences.
- Wilson, E. & Moore, G. (2004). Factors related to the intent of professionals in agricultural and extension education to enroll in an online Master's Degree program", Journal of agricultural education, 45.