

## **Investigation of the Development Obstacles of the Informational Literacy of Faculty Members in Region 1 Universities, Iran**

**Eisa Amiri<sup>1</sup>, Seyed Ahmad Hashemi<sup>2</sup> and Abolfazl Abbasi<sup>\*3</sup>**

<sup>1</sup>Department of Education, Lamerd Branch, Islamic Azad University, Iran

<sup>2</sup>Lamerd Branch, Islamic Azad University, Iran

<sup>\*3</sup>Educational Management, Shiraz University, Iran

[A.Abolfazl1369@yahoo.com](mailto:A.Abolfazl1369@yahoo.com)

### **Abstract**

The present research investigates the development of obstacles to the informational literacy of faculty member in Islamic Azad Universities, and presents the proposed methods to improve this skill. The present research appraises the technological, economic, cultural, structural and human obstacles in university environments. The present research is survey-descriptive and Statistical population consists of 2131 faculty members of region1 Islamic Azad Universities in 2011-2012. The sample consists of 325 professors based on Morgan's table. We selected them using cluster random sampling, so we selected several universities and appraised their professors. The data collected by a questionnaire that is made by researcher based on liker's spectrum. This questionnaire was used after the determination of its validity by specialists and its stability was conformed using Cronbach Alpha coefficient (Alpha: 0.941). The analysis of data carried out using descriptive statistics methods (frequency, the percent of frequency, mean and standard deviation) and SPSS software. The results of research show that economic and technological obstacles are the most important obstacles of the informational literacy of faculty members.

**Keywords:** informational literacy, faculty member, region1 Islamic Azad Universities, information and communication technology

### **Introduction**

The effect of technology on society formation started when human was applying instruments. The value of stone instruments reduced due to the new resources of food, increasing population, spreading territory and factories that changed the social structure of initial humans' life, and new technology affected society and the humans' lifestyle (Richard,2004). The purport of informational literacy has continuously changed during the different period of humans' life. This process includes the simplest literacy state. The simplest literacy state is necessary skills of each person based on his (or her) role at society such as reading, writing and self-language comprehension (Bawden, 2001). Informational literacy has different definition in many resources for example:

a) Selection suitable informational behavior to obtain necessary information from methods or media with necessary awareness about the importance of correct use of information (Veber and Jansen, 2002).

b) The ability to be available, appraisal and use of information using different resources (estive, 2003)

c) The ability to be available, appraisal and use of information in each shape and frame such as electronic and printed.

Obtaining informational literacy isn't limited to a specific time and is based on lifelong learning (Parirokh, 2008).

Lum (2006) expresses that a majority of faculty members of Duke University present useful programs about information and communication technology. According to Lum's investigation, faculty members use instruments that not only record speeches but also encourage students to read and edit recorded speeches (yang, 2008). Many faculty members introduce the benefit of internet, so use of internet should increase in speeches. Yang expresses that present online speeches are popular. According to Ranson, Graham and Mott's research (2007), members use information and communication technology for different goals such as educational goals, learning, efficacy, productivity, profitability, obtaining better life in society and communication. Hankel and Han (2004), faculty members of Germany Almena engineering University, express that multimedia applications are useful methods to educate and learn. They use multimedia instruments and software to design and pattern at engineering designing class (p.87). The results of Garcia's research (2004) at Texas University with subject "investigation of the amount of use of internet by faculty members" show that the younger faculty members use more than old faculty members. Also some professors don't use information technology because they believe that traditional methods of education have better efficacy and they don't want to expend their time for learning.

The present research observes negative and meaningful correlation between the obstacles of use of internet and the amount of use of this technology by faculty members. The main obstacles are faculty member resistance to new changes, low attention to the educational needs in new technology development, shortage of culture to use new technology at universities and the traditional belief of faculty member. Pelogram (2001), technology researcher, in his research titled; "investigation of ICT application at Turkey schools", 18 schools were studied. His research results show that there are many obstacles to apply information technology such as shortage of computer, accessories, software issues and technical support, lake of technical help, suitable program, skills, local channels, supervisor, and the weak infrastructure of teleconferencing.

Anderson (2006), in his research investigated the amount of use of internet by students and the faculty members of China Universities and show that use of internet improve educational experience and increase scientific creativity. He introduces 3 obstacles to develop this technology that include: shortage of budget, shortage of facilities and lake of planning.

Okijie (2006) express that success in using information and communication technology at classes depending on the empowerment of teachers to find the relationship between education and information and communication technology, use of new instruments relevant to subject, learning and selecting the best methods of structure, feedback, appraisal and assessment methods and follow-up activities. Wide attitude to use information and communication technology causes teachers use information and communication technology in education programs successfully. Rother (2005), in America understood that a few teachers depended on technology to do their things and regulated their technology with daily education program. Koban (2001) explained this issue as well. Beggz (2000) expresses that shortage of time and education are the most important obstacles to applying information and communication technology at higher education. Beker (2007) and koban (2001), understood that one of the main problems of information and communication technology in teaching is lake of correct perception of university faculty members about the better application of instruments. Other researches, determined other obstacles of the application of information and communication technology in education. Williams (2007; 167) understood that lesson content and shortage of support can be the obstacles of the application of information and communication technology. He expresses "cultural suitable support causes university faculty members and the supporters of modern technology to discuss about software and hardware fields and provide positive and satisfactory results". Koban (2001) expressed that shortage of time and support of technology are main obstacles at university. Nicolle (2005) understood that the motivation and appetite of

university faculty members toward information and communication technology and its changes have great role in the application of information and communication technology.

According to what mentioned above, the importance of information literacy development investigated in the present research to present proposed methods to develop and improve the information literacy of faculty members in region1 Islamic Azad Universities. The present research tries to answer the following questions:

- 1) What are the economic obstacles of the information literacy development of faculty members in region1 Islamic Azad Universities?
- 2) What are the structural obstacles of the information literacy development of faculty members in region1 Islamic Azad Universities?
- 3) What are the cultural obstacles of the information literacy development of faculty members in region1 Islamic Azad Universities?
- 4) What are the human obstacles of the information literacy development of faculty members in region1 Islamic Azad Universities?

### **Materials and Methods**

The present research is survey-descriptive with regard to its objective, application and the method of data collection. Statistical society consists of 2131 faculty members of region1 Islamic Azad Universities in 2011-2012. The sample equals to 325 professors based on Margon's table that provides using cluster random sampling. We used a questionnaire with 2 parts that is made by researcher to collect data. First part relevant to public information including gender, educational group, scientific rank, having experience of teaching and certificate, second part relevant to specialized information including 5 subsets of 10 dialects that investigate the effect of obstacles (economic, structural, cultural, human). This questionnaire was used after the determination of its validity by specialists and its stability was conformed using 0.834 Cronbach Alpha coefficient and SPSS software. After providing questionnaire and collecting data, we use descriptive Statistics methods (frequency, the percent of frequency, mean and standard deviation) to analyze data.

### **Results**

*Question 1:* what are the economic obstacles of the information literacy development of faculty member in region1 Islamic Azad Universities?

According to the results, the economic obstacles components of the information literacy development of faculty member are greater than 3, in faculty member's opinion. Low budget to develop the infrastructures of information and communication technology is the most important economic obstacle.

*Question 2:* what are the structural obstacles to the information literacy development of faculty member in region1 Islamic Azad Universities?

According to table 2 results, the structural obstacles components of the information literacy development of faculty member are greater than 3 in faculty members' opinion. Unsuitable planning to develop information and communication technology and not being up to date in management executive structure about new technology are the most important structural obstacles.

*Question 3:* what are the cultural obstacles of the information literacy development of faculty members in region1 Islamic Azad Universities?

According to the results, the cultural obstacles components of the information literacy development of faculty members are greater or close to 3, in faculty member's opinion. Unnecessary use of modern technology is the most important cultural obstacle.

**Table 1. Descriptive results relevant to economic obstacles**

	mean	Standard deviation
Low budget to develop information and communication technology in scientific environments	<b>3.41</b>	<b>0.92</b>
Low budget to develop infrastructures in related to information and communication technology	<b>3.46</b>	<b>0.89</b>
Low budget to buy suitable hardware	<b>3.38</b>	<b>0.91</b>
Low budget to buy suitable software	<b>3.31</b>	<b>0.90</b>
expense to Buy personal software and hardware	<b>3.30</b>	<b>0.87</b>
High expense use of internet in country	<b>3.39</b>	<b>0.90</b>
Not being update information and communication technology due to financial problems	<b>3.33</b>	<b>0.95</b>
Don't having research project about information and communication technology due to financial problems	<b>95.38</b>	<b>0.94</b>
High expense to develop electronic education in university	<b>3.38</b>	<b>0.95</b>
Low capital of affective institution at modern technology development in university	<b>3.33</b>	<b>1.06</b>
Economic obstacles	<b>3.36</b>	<b>0.92</b>

**Table 2. Descriptive results relevant to structural obstacles**

	mean	Standard deviation
Management problem in information and communication technology at scientific environment	<b>3.13</b>	<b>0.96</b>
Centralizing Country management structure to perform information and communication technology plans	<b>3.25</b>	<b>0.89</b>
Disregarding the Condition and features of different areas in information and communication technology	<b>3.25</b>	<b>0.92</b>
The traditional belief of faculty members about use of modern technology	<b>3.20</b>	<b>1.00</b>
The traditional belief of managers about the use of modern technology	<b>3.23</b>	<b>1.04</b>
Not being update management structure about modern technology	<b>3.30</b>	<b>1.01</b>
Low compatibility between different parts of executive in use of modern technology	<b>3.20</b>	<b>0.96</b>
Higher managers unsuitable support of modern technology	<b>3.25</b>	<b>1.04</b>
Unsuitable Planning to develop information and communication technology	<b>3.30</b>	<b>0.97</b>
Low occasion to use of modern technology in class	<b>3.02</b>	<b>1.06</b>
structural obstacles	<b>3.21</b>	<b>0.98</b>

*Question 4:* what are the human obstacles of the information literacy development of faculty member in region1 Islamic Azad Universities?

According to the results of table 4, the human obstacles components of the information literacy development of faculty members are greater or close to 3, in faculty member's opinion.

Little attention to educational needs to develop modern technology is the most important human obstacles.

**Table 3. Descriptive results relevant to cultural obstacles**

	mean	Standard deviation
The unsuitable attitude of managers to develop information and communication technology	<b>3.08</b>	<b>0.90</b>
Low attention to cultural context to develop information and communication technology	<b>3.23</b>	<b>0.88</b>
Public belief to use traditional systems	<b>3.02</b>	<b>0.94</b>
belief to fragmentation due to use modern technology	<b>2.93</b>	<b>0.93</b>
Unsuitable attitude to effect modern technology on learning quality	<b>2.97</b>	<b>0.93</b>
Not being cultural use of modern technology in universities	<b>3.16</b>	<b>0.82</b>
media low activities to use information and communication technology in scientific environments	<b>3.23</b>	<b>0.97</b>
low recognition of faculty members about modern technology	<b>3.13</b>	<b>0.90</b>
Unsuitable Culture to use information and communication technology in scientific environments	<b>3.08</b>	<b>0.95</b>
Not being necessity of use of modern technology in scientific environments	<b>3.46</b>	<b>0.94</b>
cultural obstacles	<b>3.13</b>	<b>0.92</b>

**Table 4. Descriptive results relevant to human obstacles**

	mean	Standard deviation
Shortage of specialist in universities to develop information and communication technology	<b>1.04</b>	<b>1.04</b>
Not having skill to use information and communication technology	<b>3.11</b>	<b>0.91</b>
Low interest in use of information and communication technology in learning	<b>3.07</b>	<b>0.81</b>
Low attention of educational software and hardware designer to learners needs	<b>3.07</b>	<b>0.95</b>
Low attention of educational software and hardware designer to society needs	<b>3.03</b>	<b>0.93</b>
Low attention of educational software and hardware designer to scientific needs	<b>2.97</b>	<b>0.98</b>
Resistance of faculty members to new alternation	<b>2.97</b>	<b>1.08</b>
fear of faculty members to use modern technology due to low awareness about these methods	<b>2.97</b>	<b>1.00</b>
inapplicable educations for faculty member to use modern technology	<b>3.00</b>	<b>1.00</b>
Little attention to educational needs	<b>3.16</b>	<b>1.00</b>
human obstacles	<b>3.02</b>	<b>0.97</b>

### Conclusion

In table 6, mean and standard deviation relevant to all of the obstacles are given. The results show that in faculty member's opinion, the most important obstacles of their information literacy development are economic obstacles. Technology, structural, cultural and human is after economic obstacles.

**Table 6. Ranking of the obstacles to information literacy development**

Rank	Obstacles	Mean	Standard Deviation
1	economic	<b>3.36</b>	0.99
2	structural	3.21	0.98
3	cultural	3.13	0.92
4	human	3.02	0.97

In the present research, the faculty members of region1 Islamic Azad Universities express that economic obstacles are the most important obstacles to their information literacy development, so; we should capitalize and plan in this base. Creation of a structure appropriate to world changes is an essential need that we should notice it, so the cognition of structural obstacles is important. In faculty member's opinion, structural obstacles were introduced based on priority as second obstacles.

We need to provide appropriate cultural requirements in order to change, so information literacy development and use of modern technology needs suitable culture too. In faculty member's opinion, cultural obstacles are third obstacles to information literacy development. Planning to remove these obstacles to change especially in modern technology field can provide basis of information literacy development. In faculty member's opinion, these obstacles have less influence, but it is necessary to notice them. The result of this research is consistent with Modir Amani's (2005), Montazer's (2005), Effat Nezhad's (1381), Qadery's (2006), Anderson (2006). Hepworth's (2000), Preussler's (1998 to 2000), Garsia's et al (2004), Pelgrum's (2001) researches.

### References

- Anderso, S., (2006). The evaluation of higher education in chin: A storied experiences of internet usage by student and faculty. Available from: <http://www.Proquest.com>.
- Bawden, D. (2001). Information and Digital Literacies: A Review of concepts, J of Documentation ,57(2) , 218-259.
- Becker, C. M. (2007). An examination of the relationship between teachers 'technological experiences, skills, and integrative practices. Retrieved from; ProQuest Digital Dissertations database. (AAT 3263046).
- Beggs, T. A. (2000). Influences and barriers to the adoption of instructional technology. Retrieved July 17, 2006, from; <http://www.mtsu.edu/~itconf/proceed00/beggs/beggs.htm>.
- Garcia, J. Wingenbach, G. & Hamilton, W. (2004). Internet use in the Texas Mexico Initiative. Proceedings of the 20th annual conference of the association for international.
- Ghaderi, M.(2006). A survey of ICT development strategies in educational systems in, Australia, America & India and compare them with Iran. MA thesis, department of psychology & education. Allame Tabatabai.

- Hepworth, M. (2000). Developing Information Literacy Programs in Singapore information literacy around the world Advances in programs and Research Wagg, New South Wales: Charles Strut University PP51-65.
- Höhne, G., & Henkel, V. (2004). Application of multimedia in engineering design education. *European Journal of Engineering Education*, 29(1), 87-96.
- Leh, A. (2005). Lessons learned from service learning and reverse mentoring in faculty development: A case study in technology training. *Journal of Technology and Teacher Education*, 13(1), 25-41.
- Liebscher, P. Eileen, C. & Denman, D. (1996). Factors that influence the use of electronic networks by Science and engineering faculty at small institutions mall: web searching behavior of high school students. *Journal of the American Society Information*, 47 (2), 24-37.
- Lum, L. (2006). The power of podcasting. *Diverse: Issues in Higher Education*, 23(2), 32-35.
- Mor, P. (2000). Learning to Gather: Staff Development for Information Literacy Education in and Research. Wagga. New South Wales: Charles struts.
- Nicolle, P. S. (2005). Technology adoption into teaching and learning by mainstream university faculty: A mixed methodology study revealing the "how, when, why, and why not." Retrieved July 18, 2008, from ProQuest Digital Dissertations database. (AAT 3184089)
- Richards, C. (2004). From old to new learning: Global imperatives, exemplary Asian dilemmas and ICT as a key to cultural change in education. *Globalization, Societies & Education*, 2(3), 337-353.
- Rother, C. (2005). Is technology changing how you teach? *Technological Horizons in Education Journal*, 33(3), 34-36.
- Staples, A., Pugach, M., & Himes, D. (2005). Rethinking the technology integration challenge: Cases from three urban elementary schools. *Journal of Research on Technology in Education*, 37(3), 285-311.
- Steeve, G. (2003). Information literacy Bibliography and Internet Sites. Available online at : [http://www.Newplats.edu/assistance/tutorials/info lit. Html](http://www.Newplats.edu/assistance/tutorials/info%20lit.html).
- Tyler T. (2002). Is the Internet changing social life? It seems the more things change, the more they stay the same. *Journal of Social Issues*, 58(1), 195-205.
- Webber, S. & Johnson , D. (2002). Information Definition and Models : 2001 , Accessed: [dis. Shef. Ac.uk/ Literacy / Definition .htm / Bowden.](http://dis.shef.ac.uk/Literacy/Definition.htm)
- Williams, E. J. (2007). Technology-mediated pedagogy: A study of negotiated realities in higher education. Retrieved April 19, 2008, from ProQuest Digital Dissertations database. (AAT 3286094)
- Young, J. R. (2008). Short and sweet: Technology shrinks the lecture. *Chronicle of Higher Education*, 54(41), A6-A9.