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# **Distance Learners' Familiarity with the Concept of Digital Library: A Case Study of Virtual University of Shiraz, Iran**

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## **Abstract**

This survey examines the familiarity of students at Virtual University of Shiraz (VUS), as a first virtual institution in Iran, with the concept and importance of digital libraries. To do this research, a descriptive and survey methodology was used. Students of Virtual University of Shiraz in comprise the population of the study. Findings showed that more than 66 percent of distance students are not familiar with the concept of digital library. They believe that lack of a well-structured digital library has had a negative impact on the academic achievement of students of Virtual University of Shiraz. Students have also expressed that the information resources provided by the university cannot meet all their educational and information needs.

**Keywords:** digital libraries, distance education, information needs, Virtual University of Shiraz (VUS), Iran.

## **Introduction**

Education plays a significant role in social life of humans. It is one of the basic criteria of an advanced society. Today, technology-based training methods are considered as one of essential needs of people, especially among specialized parts of society. (Saeedi, 2004). Information technologies have taken root in all aspects of life; and higher education is no exception. Significantly, such technologies have facilitated the virtual delivery of academic programs. These advances in Information Communication and Technology (ICT) have demolished the barriers of physical distance and other drawbacks associated with distance education.

Importance of ICT development is so much that after the first decade of the 21<sup>st</sup> century, we find few educational and research activities without the use of Internet and computer communications. If in the past, the education was teacher-oriented and the book was as a main source of information, nowadays, educational centers use novel communication and technological tools for training. The emergence and development of local, regional, and international information networks (such as Internet, multimedia, communication technologies, etc.) have provided new tools and methods for designers, managers, and policy-makers of education.

Provision of library and information services is one of the essential support systems involved in any distance education program. "The library plays a significant role in enhancing the quality of distance education programs and is one key indicator in quality assurance (Sacchanand, 2002)" and "as universities establish higher education centers in communities around the country, it is important that their students be supplied with the research tools necessary to ensure them the potential for success"(Bibb, 2003).

"Most of the e-learning institutions in Iran do not provide sufficient support for distance-learning students to pursue their courses successfully" (Khasseh et. al. 2009). Therefore, the distinct information needs of distance learners are often not recognized by universities and program tutors.

Given the above, this survey examines the familiarity of students of Virtual University of Shiraz (VUS)<sup>1</sup>, as a first virtual institution in Iran, with digital libraries.

## **Literature Review**

Research in the field of distance education is extensive, but "much of the literature on distance education does not address the issue of library services to distance learners" (Moyo & Cahoy, 2003). Kavulya (2004) opined that access to adequate library resources is essential to the attainment of superior academic skills. He believes that distance learning students need to use reference services and book reserves, benefit from inter-library loan services and have access to electronic databases. Indeed, some of the students usually have had little or no exposure to library use before the distance learning programs. Training in library use could be part of the educational program.

Results of a survey titled "distance education libraries in the US ..." conducted by Yang (2005) indicated that many of members of American Library Association (ALA) offer information services to distance learners and majority of them provide free services such as interlibrary loan and document delivery. The study of Khasseh et. al. (2009) on the information needs and priorities of distance education students of Virtual University of Shiraz indicated that "although distance students had positive perceptions toward the use of information resources, the university had no formal library services for the students to use during the study".

Sullo et al. (2012) in a research entitled " Rethinking library service to distance education students: Analyzing the embedded librarian model" "sought to determine the types of questions asked of the librarian, with the goal of informing future interactions with distance education classes to help develop a standard "protocol" for working with this population of students.

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<sup>1</sup> - <http://vu.shirazu.ac.ir/>

Eighty-two questions were categorized and qualitatively analyzed. The findings have prompted librarians to explore tools such as Elluminate Live!, a tool that allows librarians to provide synchronous instruction within the Blackboard environment". In a recent research, Jelfs and Richardson (2013) investigate the use of digital technologies across the adult life span in distance learners taking courses with the UK Open University. "In total, 7000 people were surveyed, of whom more than 4000 responded. Nearly all these students had access to a computer and the Internet, but younger students were more likely than older students to have access to other technologies, to spend longer time using those technologies and to have more positive attitudes to digital technology. Older students were more likely than younger students to adopt deep and strategic approaches to studying and less likely to adopt a surface approach to studying."

Literature review suggests that although a lot of researches have been conducted on distance education and its elements, there has not been much survey on the significant of library services in distance education process.

## **Research Questions**

- 1- How much are the students of VUS familiar with the concept of digital library?
- 2- How much can the lack of digital library influence on the academic achievement of students?
- 3- To what extent can the information resources provided by VUS meet the information needs of students?
- 4- To what extent does the VUS provide electronic information resources for its distance students?
- 5- How quickly VUS students can access digital resources via Internet?
- 6- Is there any significant difference in male and female students' view regarding the use of print and electronic resources?
- 7- Is there any significant difference in viewpoints of students of different academic levels regarding the use of print and electronic resources?

## **Research Methodology**

The descriptive and survey methodology was used in this study. Students of VUS make up the population of this survey. The total population at the time of this study was 1400 students studying in 5 fields of study, including Information Technology (M.S.), Law (B.S.), Electrical Engineering (B.S.), Monitoring Tools, and Computer Science (B.S.).

To determine the sample, a stratified random sampling was used. By Cochran formula  $n = \frac{N.Z^2.p.q}{(N-1)d^2 + z^2.p.q}$ , 175 students are randomly selected as statistical sample. Data collection instrument in this research is a self-administered questionnaire. Of the total sent questionnaires, 166 questionnaires are filled out by the respondents (94.86 % participation rate). Considering the nature of this research, for data analysis, descriptive and inferential were used.

## Research Findings

1 - *How much are the students of VUS familiar with the concept of digital library?*

As can be seen in Table 1, more than 66 percent of respondents believe that their familiarity with the concept of digital library is "very low" to "moderate".

Table 1: Familiarity with the concept of digital libraries

Acquaintance	Frequency	Percentage
Very low	25	15.1
Low	40	24.1
Moderate	45	27.1
High	47	28.3
Very high	9	5.4
Total	166	100

Table 2: Frequency, mean and standard deviation of familiarity with the concept of digital library

Question No.	Frequency	Mean	Standard deviation
1	166	2.81	261.2

More analysis revealed that the observed mean (2.81) is statically significant with the theoretical mean (3.00). It should be mentioned that a predetermine level of significance ( $P < 0.001$ ) was chosen for this study. In other words, familiarity of VUS students with the concept of digital library is very low (Table 2).

*2. How much can the lack of digital library influence on the academic achievement of students?*

In answering this question, the researchers compared the observed mean with the theoretical mean. Findings indicated that observed mean is statistically significant ( $P < 0.001$ ). In other words, the students of VUS believe that the lack of digital library has influenced their academic achievement (Table 3).

Table 3: values related to students perspectives about the lack of digital library

Question No.		Frequency	Observed probability	Theoretical probability	P values
2	Values $\leq$ 3.0	124	0.77	0.50	$P < 0.001$
	Values $>$ 3.0	38	0.23	0.50	

3 - *To what extent can the information resources provided by VUS meet the information needs of students?*

Findings shows that there are 132 values smaller than 3. It means that information resources provided by VUS can not meet the information needs of students significantly (Table 4).

Table 4: Alpha and other values of electronic resources provided by VUS

Question No.		Frequency	Observed probability	Theoretical probability	P values
3	Values $\leq$ 3.0	132	0.88	0.50	P<0.001
	Values >3.0	18	0.12	0.50	

4. *To what extent does the VUS provide electronic information resources for its distance students?*

Since the values smaller than 3.00 are significant, it can be mentioned that electronic resources provided by VUS to its students is very limitedly.

Table 5: Alpha and other values related to the electronic resources provided by VUS

Question		Frequency	Observed	Theoretical	P values
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No.			probability	probability	
4	Values $\leq$ 3.0	144	0.90	0.50	P<0.001
	Values >3.0	16	0.10	0.50	

*5. How quickly VUS students can access digital resources via Internet?*

Due to the number of values smaller than 3.00, it is understood that distance students of VUS believe that the Internet speed for accessing information resources is very low (Table 6).

Table 6: Alpha and other values related to the speed of Internet in accessing digital resources

Question No.		Frequency	Observed probability	Theoretical probability	P values
5	Values $\leq$ 3.0	133	0.84	0.50	P<0.001
	Values >3.0	26	0.16	0.50	

*6. Is there any significant difference in male and female students' views regarding the use of print and electronic resources?*

Independent t-test was performed to determine whether significant difference existed between male/female students' views; and results indicated that it is not statistically significant (t-value= 0.59). Therefore, it seems that views of males and females are similar and all of them believe that both print and electronic resources should be included in their education (Table 7).

Table 7: Mean and standard deviation for views regarding the use of print and electronic resources

Gender	Frequency	Mean	Standard deviation
Female	60	113.02	14.11
Male	106	114.42	14.87

*7. Is there any significant difference in viewpoints of students of different academic levels regarding the use of print and electronic resources?*

Since the number of associate students was very low (3), they were added to BS students and two groups of undergraduate and postgraduate degree are compared. To compare these two groups, the researchers used t-test. The descriptive statistics are included in Table 8.

Table 8: Mean and standard deviation of B.S and M.S. students' perspectives

Educational level	Frequency	Mean	Standard deviation
B.S.	61	111.31	12.29
M.S.	105	115.42	15.60

As can be seen in Table 9, there was found no significant difference in viewpoints of students of different academic levels regarding the use of print and electronic resources. In other words, although mean differences of two groups is 4.10, but it is not statistically significant.

Table 9: T value and significant level of alpha

Educational level	Frequency	Mean	Standard deviation
B.S.	61	111.31	12.29
M.S.	105	115.42	15.60

## Discussion and Conclusions

"With the rapid emergence of distance education, the changing nature of information access, and the demand for equitable services for all students, serving the needs and preferences of distance students has become increasingly important" (Yang, 2005). When traditional universities extend their services to distance education, "they need to reconsider the role that the library plays in the educational process" (Lebowitz, 1997). Therefore, "the quality of any degree is diminished if holders of such a degree never used a library for independent study and learning" (Mabawonku, 2004).

Dew (2001) gives prominence to recognize students' perceptions towards distance programs. He believes that such recognition is necessary for librarians to have a successful program. This survey addressed the familiarity of students of VUS with the concept and importance of digital library. Findings showed that more than 66 percent of respondents are not familiar with the concept of digital libraries. The findings of this part of the research are aligned with the findings of Lock and Nordon (1998). Students of VUS believe that lack of an appropriate digital library plays a negative role in their education. They have also expressed that the resources provided by the VUS can not meet all their educational needs. Result of this survey, like findings of a study by Liu and Yang (2004) indicated that information services provided by VUS are not sufficient for their academic achievements. Also, both males and females' views about the use of print and

electronic resources are same; therefore, print and electronic resources should be included in their programs.

The overall picture that emerged from the study findings states that Virtual University of Shiraz (VUS) does not cater for the specialized needs of part-time and distance learners, which will lead to an increasing use of the Internet unqualified resources as a substitute for high quality library services.

According to the results of this research, managers involved in distance education programs should develop and establish sufficient infrastructures to create a standard digital library for their distant students. In a country where distance students pay tuition fees that are relatively high, they may feel that they have the right to request better support with regard to their information requirements.

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