

New Educational System and Information and Communication Technology's Influence on the Process of Information Seeking behavior: Case of Students of Islamic higher Education¹

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Abstract

Assessment of students' ability to cope with a new educational system and Information technology in Islamic Higher education-based setting may provide information with which to develop effective interventions to improve the process of information seeking behavior in the future. This study aims to identify the current status of information seeking behavior's process based on the new educational system and Information technology in Islamic Higher education. The conceptual model which was used in this study included five stages as follows: Access to Information Resources, Using Information Resources, Evaluating Information Resources, Crisis situation, and Research skills. In order to assess validity (content), the views of Knowledge and Information Sciences professors and expert's assessment was used and the questionnaire reliability was obtained between 0.684 and 0.754 by Cronbach alpha. In order to fulfill the aim of the study, 323 Female Students who participated in this study were randomly selected were 215 in Fars and 108 in Bushehr Province holders in 1394-1395 Academic years at Fars and Bushehr Islamic Higher education. Data collection tool in this study was the questionnaire. The Wilcoxon signed-rank test used to analyse data. The results showed that Library in Islamic Higher education, Printing Book, Authority, and learning in the classroom or training at the workshop, are so important elements for Islamic Higher education students. On the other hand there was no significant difference between criteria regarding crisis situation.

Keywords: Education System, Information Technology, Information Seeking Behavior, Islamic Higher Education System, Fars Province, Bushehr Province.

Introduction

The significance of this study relies on its emphasis on the necessity of adoption of special and conscious approaches to use religious studies. Religious studies are Subgroup of

Humanities.

Islamic Higher education includes many modern subjects as well as inters faith and inters sectarian initiatives. The education students begin their studies by Islamic philosophy, jurisprudence, traditions, theology, evaluation of biographies, Islamic mysticism, Logic, language studies, interpretation of the holy books, history, holy books studies and principles of jurisprudence. Once these studies have been completed, they may begin graduated studies by studying advanced old textbooks, and research courses.

The present study tries to demonstrate how the new educational system and Information technology in Islamic Higher education have influence on process of information seeking behavior in Islamic Higher education of students of Fars and Bushehr Province that it maybe generalizable to other OIC countries.

The use of Islamic Higher education-based organizations as an effective community partner for information promotion activities has shown some promise, especially with support from Islamic Higher education leaders (Carter-Edwards, Johnson Jr, Whitt-Glover, Bruce, & Goldmon, 2011; Webb, Bopp, & Fallon, 2013). In addition, Lumpkins, Coffey, Daley, and Greiner (2013) encouraged the church and its leaders to become an integral part of information promotion activities in the church-based setting, as Islamic Higher education have a strong influence on both the social and physical environment in their seminaries and serve as models in the religious community (Bopp, Peterson, & Webb, 2012). After the 1979 revolution in Iran, the state focused on religious studies for both men and women and began to centralize the women's Islamic studies system. The women's seminaries in Qom were centralized as one large school. In Khorasan province the women's Islamic school ruled in support of clerical center of Mashhad. In the other parts of the country, women's seminaries were integrated into the Centre for Management of Women's Seminaries. Since the mid-1990s, the latter center has established more than 300 seminaries across Iran (before the revolution less than a dozen existed in the entire country).

Nowadays, higher education institutes benefits a lot from modern information and communication technologies (ICTs), as well as more systemized and structured courses regarding ICTs. Seminaries do not consider ICTs in their syllabuses as much as they deserve. Furthermore, ICTs should study in parallel with other Islamic activities such as writing, translating, preaching, teaching others, etc.

It is noteworthy that there is no standard syllabus or curriculum for these studies. Each seminary tends to create its own programs. There are, however, some standard texts in each subject area that are considered "classics" and that all seminaries students are expected to study.

Assessment of students' ability to cope with a new educational system and information technology in Islamic Higher education-based setting may provide information with which to develop their abilities to improve the process of information seeking behavior in the future.

The aim of this research is to survey the extent to which the new educational system and information technology influenced the process of information seeking behavior in Islamic Higher education at seminaries. The conceptual model which was used in this study included

five stages as follows: access, usage, evaluation, crisis situation, and research skills regarding information resources.

To achieve the aims we addressed the following questions:

1- Which methods of accessing information resources i.e. databases, Internet, library, interlibrary loan, private library are the preference for the Islamic Higher education students?

2- Which formats of information resources (electronic or print) are used by Islamic Higher education students considering article, book, and thesis?

3- Which criteria (authority, up-to-date databases, and relativity to research interest, easy to understand, availability) of information resources evaluation are more important to Islamic Higher education students?

4- What are the crisis situation affecting Islamic Higher education students information seeking behavior i.e. professor ask you, friends ask you, inability to do a task?

5- How Islamic Higher education students acquire research skills: learning in the classroom or training at the workshop, personal reading, and research?

Literature Review

"Information seeking behavior of scholars and researchers" has been used in the literature of library and information science since the 1950s. Since then, the number of studies on information behavior, especially on information seeking behavior and the models has been increased (Salajegheh, Hayati, 2009; Fattahi, 2011; Eftekhar, Hayati, 2016). Krikelas (1983) in displaying a model of information seeking, expressed that it starts when somebody sees that his or her present information is not as much as that expected to manage some issue. The procedure closes when that discernment never again exists. Ellis's (1989) information seeking behavior model included six elements that he called stages. These stages are: starting, chaining, browsing, differentiating, monitoring and extracting. In 1993, Ellis, Cox and Hall compared information seeking behavior patterns of researchers in physics and social sciences and found that they were identical. However, they also found new elements, verifying and ending, which were added to the model. In 1997, Ellis and Haugan presented another model for information seeking behavior which was not so different from Ellis 1993 model.

Meho and Tibbo (2003) reproduced Ellis's information seeking behavior model of social researchers with different population and the six stages of Ellis's model were upheld. They concluded that their model included highlights not in Ellis' model, for example accessing, networking, verifying, and information managing. Because of their investigation, another model was created by them which, in contrast to Ellis' model, had four interrelated stages: searching, accessing, processing, and ending.

This was not the end of Ellis' model as Salajegheh & Hayati (2009) developed this model to study information seeking behaviors of medical scholars in Iranian medical schools. They added new stages to Ellis' model. Salajegheh & Hayati model includes stages such as initiation, searching, retrieving, browsing, gathering, and using of information (Eftekhar, Hayati, 2016; Eftekhar, 2018; Eftekhar, Shakeryari, 2018).

Jinadu & Kiran (2016) investigated the skills of Nigerian employees (academic staffs) in

their workplace. Their subjects worked in education department. This qualitative study uncovered eight practices respect to academics and undergraduates regarding information literacy skills and showed “two main categories of practices; academic-related and social . professional related” (p.118). Finally they uttered that there is a need to see how researchers in their workplace provide the opportunity for undergraduate students to be an information literate person, who can effectively take an interest in the twenty-first-century work environment. Abrizah and Zainab (2011) who investigated how students used digital resources for their history school project “point out that resource-based learning in history teaching is an ideal platform to engage students in information literacy through formulating meaningful questions, planning tasks, gathering resources, evaluating information, collaborating with others, and reporting findings” (cited in Yu, Abrizah & Sani, 2016; Eftekhar & Ziaei, 2016).

Most papers are based on academic communities, and don't have any study based on Islamic Higher education. So, this study is a survey on new educational system and information technology affecting the process of information seeking behavior of Students of Islamic Higher education of Fars and Bushehr Province. Moreover, information seeking behavior researches have caused developments in information literacy and skills training, electronic resources, virtual libraries, and traditional resources. In interdisciplinary information-seeking, the prevalence of models based on single-discipline researchers, and the assumptions that arise from them, may act to inhibit the development of further understanding and development. This paper is different from previous studies since it deals with access, usage, evaluation, crisis situation, and research skills in relation to information resources regarding students of Islamic Higher education of Fars and Bushehr Province.

Materials and Method

The method of this study is a survey with analytical approach which followed the model developed by Salajegheh and Hayati (2009). However, we made some modifications in their model. The conceptual model which was used in this study included five stages as follows: Access to Information Resources, Using Information Resources, Evaluating Information Resources, Crisis situation, and Research skills. The research population includes all Female students in the Islamic Higher education of Fars and Bushehr Province, which have been in the academic year 2015-2016. Female students in Islamic Higher education of Fars and Bushehr Province were randomly selected with Cochran formula from 3443 students in two Province namely, 2078 in Fars and 1365 in Bushehr. Finally, the 323 Female Students who participated in this study were 215 in Fars and 108 in Bushehr Province. Data collection tools in this study was questionnaire. In order to assess validity (content), the views of library and information science expert's assessment was used and the questionnaire reliability was obtained between 0.684 and 0.754 by Cronbach alpha. We used Wilcoxon signed-rank and Friedman test because of the skewed data according to Kolmogorov-Smirnov Test ($P < 0.05$) to analyze the results.

Research Findings

To achieve the aim of the study, five stages as follows: Accessing, Usage, Evaluation, Crisis situation, and Research skills regarding Information Resources were analyzed based on above mentioned non-parametric tests.

Accessing Information Resources

To accessing information resources we used five subcategories. According to Table 1 subcategories are databases, Internet and search engines, and library in Islamic Higher education, interlibrary loan, private library or procurement. Wilcoxon signed-rank test showed there is statistically difference between subcategories ($P < 0.05$).

Table 1

Mean between the variables of Accessing Information Resources

Accessing Information Resources	Mean	Mean Rank	Databases	Internet and search engines	Library in Seminary	Interlibrary loan	Private library or procurement
Databases	3.44	3.17	---	0.07	0.0001	0.0001	0.0001
Internet and search engines	3.66	3.28	-1.81	---	0.007	0.0001	0.0001
Library in Seminary	3.94	3.66	-3.6	-2.68	---	0.0001	0.0001
Interlibrary loan	2.88	2.6	-4.1	-6.6	-11.1	---	0.0001
Private library or procurement	2.51	2.29	-6.3	-8.5	-11.3	-0.34	---

$X^2 = 131.72$ df= 4 Sig. = 0.0001

Using Information Resources

The six subcategories used for using information resources. Subcategories namely electronic and print article, book, thesis were analyzed (Table 2). The results depicted that there is a statistical difference between subcategories using Wilcoxon rank-sum test ($P < 0.05$).

Table 2

Mean between the variables of Using Information Resources

Using Information Resources	Mean	Mean Rank	Electronic Article	Electronic Book	Electronic Thesis	Printing Article	Printing Book	Printing Thesis
Electronic Article	3.76	3.67	---	0.007	0.0001	0.59	0.0001	0.037
Electronic Book	3.47	3.35	-2.38	---	0.0001	0.25	0.0001	0.59
Electronic Thesis	2.85	2.85	-6.75	-5.3	---	0.0001	0.0001	0.001
Printing Article	3.68	3.46	-0.54	-1.1	-5.3	---	0.0001	0.001
Printing Book	4.68	4.48	-4.84	-6.5	-9.4	-7.7	---	0.0001
Printing Thesis	3.37	3.19	-2.08	-0.54	-3.1	-3.2	-1.8	---

$X^2 = 152.47$ df= 5 Sig. = 0.0001

Evaluating Information Resources

Evaluating information resources has been conducted based on the following subcategories (Table 3) such as authority, up-to-date databases, relativity to research interest, easy to understand, available in the library. The results present a statistical difference between subcategories according to Wilcoxon rank-sum test ($P < 0.05$).

Table 3

Mean between the variables of Evaluating Information Resources

Evaluating Information Resources	Mean	Mean Rank	Authority	Up databases	Relativity to research interest	Easy to understand	Available in library
Authority	4.13	3.7	---	0.000	0.000	0.000	0.000
Up-to-date databases	3.22	2.66	-9.5	---	0.000	0.93	0.1
Relativity to research interest	3.72	3.26	-4.3	-4.9	---	0.000	0.000
Easy to understand	3.24	2.75	-7.1	-0.08	-5.78	---	0.02
Available in library	3.08	2.65	-7.3	-1.66	-6.2	-2.3	---

$X^2 = 131.72$ $df = 4$ $Sig. = 0.0001$

Crisis Situation

The three subcategories regarding evaluating information resources are shown in Table 4. Based on the Wilcoxon rank-sum test ($P > 0.05$) there is no significant difference between subcategories, i.e. not answering questions that the professor in the classroom asks you, not answering questions that friends ask you, inability to do a task.

Table 4

Mean between the variables of Crisis situation

Crisis situation	Mean	Mean Rank	X^2	df	Sig.
Not answering questions that professor in the classroom ask you	1.52	2.05	0.2	2	6.9
Not answering questions that friends ask you	1.41	1.94			
inability to do a task	1.46	2			

Research Skills

According to Table 5 the subcategories are learning in the classroom or training at the workshop, personal reading, and research. The Wilcoxon rank-sum test showed statistical difference between three subcategories ($P < 0.05$).

Table 5

Mean between the variables of Research skills

Research skills	Mean	Mean Rank	Learning in the classroom or training at a workshop	Study	Research
Learning in the classroom or training at a workshop	2.27	2.18	---	0.000	0.053
Personal reading	1.89	1.77	-5.44	---	0.000
Research	2.14	2.05	-1.93	-4.03	---

 $X^2 = 36.5$ $df = 2$ $Sig. = 0.000$

Discussion

The aim of the study was to investigate the influence of new educational system and ICTs on Islamic Higher education students regarding information seeking behavior. The first concept was accessing information resources based on databases, internet and search engines, and library in Islamic Higher education, interlibrary loan, private library or procurement. As shown in Table 1 there is a significant difference between subcategories. Islamic Higher education students for accessing the information begin with the library collection in their seminaries. The internet and search engines placed in the second position. The mean rank shows that the students have a preference for library (3.66) and Internet and search engines (3.28) in their search strategy. Our findings are in accordance with Ellis (1989) and Salajegheh and Hayati model (2009).

Considering using information resources, the subcategories are electronic and print article, book, thesis. Printing book (mean rank, 4.48) and electronic article (mean rank, 3.67) are so significant for the students (Table 2). Abrizah and Zainab (2011) who investigated perceptions of secondary school History teaching population in searching digital library, also pointed out that access to digital documents are important which prove our results considering electronic article. Nicholas and Cosgrave (1996) also reported the same results.

Table 3 shows the students criteria for evaluating information resources with five subcategories such as authority, up-to-date databases, relativity to research interest, easy to understand, available in the library. Among these concepts, authority (mean rank, 3.7) and relativity to research interest (mean rank, 3.26) were the most important criteria for them. Authority and relativity to research interest in information resources can act as an influenced factor to optimize and improve the quality of teachers and student's information needs and support teaching and learning activities. So these criteria of information resources have an advantage to libraries in terms of savings in time, convenient and flexible document delivery. The results of this study are in line with Hakim Silvio (2006).

The next stage in information-seeking behavior starts with a crisis situation. According to Islamic Higher education students there is no significant difference between three criteria i.e. "not answering questions that professor in the classroom ask you", "Not answering questions that friends ask you", and "inability to do a task" is the most influential factor (Table 4). A personal crisis occurs when an individual can no longer cope with a situation. Crisis situation occurs when one may experience a lot of stress that disables her/him in making-decisions.

Crisis situation of our subjects start with their inability to answer the teacher's question and they become aware of their needs which is the motivation behind seeking information. Wilson (1981, 2006) showed that need is a starting point for information seeking behavior. In this regard Wallis's (2006) also pointed out a lack of awareness resulted a tendency toward needed information which are in accordance with our findings.

Table 5 shows that Islamic Higher education students' research skills cover learning in the classroom or training at a workshop, personal reading, and research. Among these concepts learning in the classroom or training at a workshop were used more than others (mean rank, 2.18). Information needs are rooted in primary needs. Information users meet their needs through learning, research, conferences and lectures. Jinadu & Kiran (2016) observed that the active participation in In-service training and workshops at the workplace empowered the employees in Nigeria. It shows that both formal and informal learning are effective in meeting information needs as showed in our results.

Conclusion

ICTs play a vital role in various fields. One of the areas which have welcomed ICTs is education. In today's rapid changes, successful organizations will be able to adapt to these changes creatively. Accordingly, Islamic Higher education is no exception. So, to cope with the new environment to share knowledge and transfer it to the society and have societal impact there is no choice except deploying ICTs. Furthermore, educational technologies are effective in educational development. The results of this study can be used to improve student's problem-solving skills in meting information needs. The most important result of this research is that using information technology tools in the new educational system will have a positive effect on the information seeking behavior of Islamic Higher education students. So that as a student uses these tools more, his/her information seeking behavior looked favorable. Regarding the findings of the study and other surveys makes it clear that further studies are needed to understand how new technologies and resources can meet and best support users' needs in different social and special contexts. It is suggested Islamic Higher education began to take advantage of the new media in teaching and learning regarding information needs.

Endnote

1. This Article is based on some Findings of Pd.D.Thesis titled " New educational system and Information technology in Seminary Effective in a process of information seeking behavior Case Study: Fars and Bushehr Province", Payame Noor University

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