Revista Publicando, 5 No 16. (1). 2018, 561-580. ISSN 1390-9304

Investigating the information literacy skill of students in Kermanshah University of medical science based on information literacy standards of ICRL in 2000

Saifollah Khosravi[1*], Abbas Aghaei[2], Faranak Karimi[3]

1. Imam Khomeini Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran, seifollahk@yahoo.com

2. Clinical Research Development Center, Imam Khomeini and Mohammad Kermanshahi Hospitals, Kermanshah University of Medical Sciences, Kermanshah, Iran.

3. Imam Khomeini Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran

Abstract

Introduction and goal: the emergence of information era, modern technologies in the field of information, unpredictable growth on information and storing technologies, organizing, retrieval and access to information require necessary skills of information literacy. The main aim of the study is to determine the skill of information literacy of students in Kermanshah University of Medical Sciences.

Materials and methods: this study is applied survey type and the tool of gathering questionnaire has been proposed based on 5 standards of information literacy of higher education of Association of College and Research Libraries. The sample of statistical population includes 242 students of Medicine, Para medicine, Nursing, and Hygiene faculties in different majors and grades of internship and training courses in Imam Khomeini hospital in Kermanshah in 2017. The data were analyzed using descriptive and inferential statistics of Mann Whitney Kruskal Wallis & Spearman in statistical software of SPSS-22.

Findings: information literacy of statistical population, 3.10±0.415, upper than median limit. There was a significant difference between the score of students' information literacy mean and gender in all standard indicators of information literacy to the superiority of males according to Mann Whitney test (P<5%).

Discussion and conclusion: students' information literacy is upper than average limit among the universities of country. It was less in girls in all standards. The reason of that is likely lack of

Received 26/06/2018
Approved 02/07/2018

computer facilities and the tools of accessing to internet in dormitories and pavilions of students and also the limitation of commuting to coffee nets.

The investigation is recommended to be done with more sample volume and also the reason of information literacy shortage to be studied in gender.

Keywords: information literacy, information resources, internet, the students in Kermanshah Medical Science University

Received 26/06/2018
Approved 02/07/2018

Introduction

Information literacy is followed by the emergence of digital communications. Information literacy is a concept, was first used by Pavel Zorkovsky, Chief of the Information Industry Association and the one who had proposed the plan of national program to achieve information literacy to the national council of library sciences and information of America in 1974. Information literacy has been described as a set of skills, helping people to find their required information and leading their lifelong learning. In another definition, information literacy means the ability of adopting a proper information behavior to identify required information for meeting information needs so that accessing to the information leads to correct, moral and effective use of information in the society. Yet, the most comprehensive, complete and concise definition of information literacy is the one, proposed by America Library Association (1998). In this association, information literacy has been defined as the ability of recognizing the need for information and location, evaluation and effective use of required information.

The emergence of information era is of the hugest challenges, affecting the different societies nowadays. Unpredictable growth of related information and technologies to storage, organizing, retrieving and accessing the information has created many transformations. Quantitative growth of information volume, the diversity of information resource physical forms and increasing the rate of accessing the information are considered as some of specifications and impacts of information era in many related texts (2). These specifications have been emerged separately in the form of six main groups of modern technologies in the field of information, modern technologies in the field of communications, increasing the information resources, the variety of information resources, specialization and globalization (3). The students need information literacy to be able to move successfully (4). Information literacy means the set of capabilities and abilities of recognizing the problem that when information is needed and when it is not. It is also the ability of location, evaluation and effective use of required information (2) that in fact is recognizing the tools of achieving information so it seems an unavoidable and vital. If the researchers don't know what appropriate system and which methods they use to achieve information and retrieve them in printed and electronic information in resources in web, they will never be able to achieve required, accurate and updated information. Hence; each researcher need to be familiarized with marketing

Received 26/06/2018
Approved 02/07/2018

Revista Publicando, 5 No 16. (1). 2018, 561-580. ISSN 1390-9304

methods in web and use in his field of job to minimize the time of searching as well as accessing the required resources (5). Being properly aware of using informational and communicational media can make our use of media more effective, dynamic and enjoyable. Although through new information and communication technologies, there are more facilities for developing the society in different aspects, using their potential need a new set of competencies (skill, knowledge and attitude). At the thirty-fourth session of the UNESCO General Conference in 2007, UNESCO invited the general managers support media and information literacy more aiming to propose the opportunity for users to have a conscious judgment about the media and information resources and expansion of civil participation in the media. UNESCO has confirmed information literacy as one of main human rights, necessary for national development, citizenship welfare, economy and educational standards (6). In a paper, titled as "investigating information literacy skills", Oconner, Radcliff and Gedeon (2001) report the primary levels of developing a standard software for investigating the skills of information literacy. Their tool is investigated in three steps of accurate design, test and retesting. Using the standards of information literacy of ACRL and American association of school libraries, the particular skills are first identified. Then some questions are developed to assess these skills. After refining the questions, tool testing is implemented by selected members in three levels of (small, medium and big group). Based on the obtained results of these studies, the questions will be changed in case of necessity. Generally, the result of their efforts led to a relatively and valid questionnaire which can be used for assessing the skills of people's information literacy (7). Crichfield (2005) also developed the tools of assessing information literacy based on the standard of information literacy capabilities for higher education. To determine the content validity of his questionnaire, he evaluates and confirms the first version of tool by three experts then the reliability of the first version is calculated using Cronbach's alpha test. Tool reliability is within alpha range of 89 and 78% in different ACRL indicators. Finally, the result of Crichfield's study (2005) showed that the questionnaire has been valid and reliable in all 5 standards of information literacy ACRL (8). To gather the required information, the questionnaire of "assessing the level of students' information literacy" has been used in this study that was designed for the first time in Iran by Fereydoon Yazdani (2012). This questionnaire is based on five standard capabilities of information literacy, approved by the ACRL. These skills

Received 26/06/2018
Approved 02/07/2018

Revista Publicando, 5 No 16. (1). 2018, 561-580. ISSN 1390-9304

include the definition of information need, finding information, valorizing the information, organizing the information and exchanging the dissemination of information (9).

In case of the rate of students' information literacy in Iran as well as the effect of different factors on it such as gender and field of study, many studies have been conducted. The results in the studies of Seifouri, Darzi and Alishan Karami (2010) on the studies of different fields of study in master and medical grades, showed that the level of study students' information literacy in lower than desired limit, for which different reasons of lack of fluency in English, lack of skills in using search tools and techniques can be mentioned (10). The studies of Amiri et al on the information literacy of Shahrekord University showed that the students were of higher information literacy than average limit and moreover, there is a significant difference between students' information literacy and their education grade (11). In the studies, conducted in Delta University of Nigeria on the students of bachelor degree, the results showed that there is a significant difference between gender and searching strategy. Girls have less information literacy than boys (12). The evidences show that most of university students pass their courses while they have only a little knowledge in the field of searching and retrieving information. The existence of barriers such as students' unawareness of location and correct assessment of information and additionally, the information experts' unawareness of students' performance during searching information leads to students' failure in achieving required information (13).

The main aim of the study is to determine the skill of information literacy of students in Kermanshah University of Medical Sciences in 2017 using 5 standards of ACRL of 2000. Therefore, the current study was designed and implemented to investigate these capabilities among the students of Kermanshah University of Medical Sciences to identify the effective underlying factors and improve the current status.

Materials and methods

300 questionnaires were distributed among the statistical population of internship and training students in Imam Khomeini educational healthcare center in the site of training classes, library and different sections of the center simultaneously in a morning and afternoon and totally 242 responses were obtained, among which 109 were men (45%) and 133 women (55%). In this population, 78 people (37% men, 63% women) belonged to medical faculty, 125 people (48%

Received 26/06/2018
Approved 02/07/2018

men, 52% women) to the nursing faculty, 5 people (four tenth men and eighth tenth women) to the health faculty and 34 people (55% men and 44% women) to the faculty of Para-medicine.

The tools of collecting data: it is a questionnaire consisting of two sections, the section is related to the personal information of statistical population including gender, grade, field of study and semester and the second section is designed and made based on the questionnaire of assessing information literacy of students, first used in Iran (9) by Yazdani (2012) according to the 5 standards of ACRL, confirmed by the Texas experts of Standards Committee Association of Research Libraries and Colleges at the Summit on January 18, 2000, American Library Association in San Antonio (14) and its validity has been confirmed. It includes 30 research options of 5-item Likert type based on performance indicators of 5 standards 1: information need, 2: information location, 3: information assessment and 5: information organizing (9) and each one of statements has been scored respectively from 1 to 5 (very low=1, low=2, average=3, high=4, very high=5), and the reliability of questionnaire was determined after its implementation on a 78-people sample using Cronbach's alpha as 94% (9).

The method: to determine the type of data normal distribution, Kolmogorov-Smirnov technique (K-S) was used in the default research and the data distribution was estimated as normal (P>0.5). Given the type of data distribution and low number of one of subsets, the descriptive statistics of median, interquartile deviation and nonparametric inferential statics of Mann Whitney, Kruskal Wallis and Spearman with 95% of confidence level (two ranges) were applied for research hypotheses.

The type of study is applied survey and data measuring scale is ranking. Documenting the 5-item Likert scale and then the mean, responses of the related questions to each standard index was separately determined using SPSS software and the mean score of information literacy in group was analyzed and extracted using Mann Whitney and Kruskal Wallis test, indicating the level of knowledge of the research group in each of the information literacy standards. finally, information literacy of statistical population students was applied based on questionnaire questions using SPSS software.

Received 26/06/2018
Approved 02/07/2018

Revista Publicando, 5 No 16. (1). 2018, 561-580. ISSN 1390-9304

Findings

Our findings measured and studied the responses of 242 people of statistical population, the level of students' information literacy according to 5 standards of higher education information literacy (ACRL) separately.

In standard 1-recognziing the information need and obtained returns of its performance indicators, familiarity with resource finding, recognizing the first and second-handed references, familiarity with printed and electronic references and finding the materials in library. Further information has been proposed in table 1. The score of students' information literacy was more than median 3 in both genders of man and woman but there was a significant difference between the rank of students' information literacy mean and gender (P=0.012) that was more in men. Further information in table 2.

In standard 2: location of information and obtained returns of its performance indicators, searching information in internet based on keywords, using different Boolean operators AND, OR, NOT, profile, speed reading method, combining elements of content, information storage, familiarity with ICDL software, web design, citation of the author's references, further information in table 1. The level of students' information literacy was more in men than median and in women less than median 3 but there was a significant difference between gender and the rank of students' information literacy mean (P=0.030) which was more in men. Further information in table 2.

In standard 3: information evaluation and obtained outputs of its performance indicators, the rate of familiarity with the criteria of evaluating written or electronic information in terms of author's credit, publisher's credit, reliability, familiarity with copyright, further information in table 1, score, the score of students; information literacy in both genders was in median 3 but there was a significant difference between the rank of students' information literacy and gender (P=0.029) it was more in men (further information in table 2).

In standard 4: organizing the information and the obtained outputs of its performance indicators, correct noting of written resources (such as writing summary, recording the important points), literary edition of elements, organizing and combining the information, intra-text reference, writing style, moral regulations of information, political regulations of information and more information in table 1. The score of students' information literacy in both men and women was

Received 26/06/2018
Approved 02/07/2018

higher than median 3 but there was a significant difference between the mean of students' information literacy and gender (P=0.010). it was more in men (further information in table 2).

In standard 5: evaluating the information and the outputs of its performance indicators, the skill of finding subject for research or writing a paper in university, defining and explaining the subject, determining the main question, determining the sub-question and ranking data (further information in table 1), the score of students' information literacy was more than median 3 in both genders but there was a significant difference between the gender and mean score of students' information literacy (P=0.031), it was more in men (further information in table 2).

There was a significant difference between the score of students' information literacy mean and gender in all standard indicators of information literacy to the superiority of males according to Mann Whitney statistical test analysis (P<5%).

In Kruskal Wallis statistical test analysis, there was not a significant difference between mean score of students' information literacy in different faculties with each one of information literacy standards (P>5%) (further information in table 2). The median of students' information literacy 3.10±0.415 was more than median limit and the first quarter was 2.63 and the third one 3.46.

In Spearman statistical test analysis, there was no significant relationship between information literacy and educational grades, field and education semester of students (P>5%).

Table 1- The frequency distribution of students' familiarity with the standards of information literacy

	The standard 1									
	Very low		Low		Average		High		Very high	
	Man	Woma	Ma	Woma	Ma	Woma	Ma	Woma	Ma	Woma
Ability to	2	4	16	27	27	56	40	32	14	14
Recognition of first and second-handed references	5 %3	8 %3	14 %6	29 0.12	53 0.22	59 0.24	23 %1	27 0.12	14 %6	410 %

Received 26/06/2018
Approved 02/07/2018

Familiarity with library references	9 %4	9 %4	27 0.11	34 0.14	36 0.15	55 0.23	30 0.12	25 0.10	12 %5	9 %4
Familiarity with Electronic References	2 %9	13 %5	18 %7	18 %7	41 0.17	51 0.21	34 %14	39 %16	15 %6	12 %5
Understanding how to find library materials	3 %2	5 %3	15 %7	28 0.12	38 %16	53 0.22	42 0.17	36 0.15	11 %5	11 %5
		The standard 2 the information location								
Familiarity with the manner of operators And ..	6 %3	7 %3	15 %7	19 %8	26 0.11	46 0.19	36 0.15	41 0.17	26 0.11	10 %4
Familiarity with the use of the profile	7 %3	8 %4	25 0.10	43 0.18	35 0.15	51 0.21	28 0.12	24 0.10	16 %6	7 %3
Fast reading and reviewing the titles of the collected data	8 %3	8 %	24 0.10	19 %	39 0.16	55 0.23	25 0.11	42 0.17	13 %3	9 %4
Aesthetic Aspects of	7 %3	9 %4	21 %9	28 0.12	42	57 0.24	25	32 0.13	14 %6	7 %3

Received 26/06/2018
Approved 02/07/2018

Combining Different Elements of a Scientific Writing					0.18		0.10			
Electronic information storage	5 %2	2 %9	21 %9	36 0.15	42 0.17	55 0.23	25 0.10	33 0.14	16 %7	7 %3
Content creation with ICDL software	7 %3	12 %5	30 0.13	28 0.12	38 0.16	55 0.23	22 0.10	27 0.12	12 %5	9 %4
Designing personalized web pages and content creation	14 %6	28 0.12	26 0.11	35 0.14	33 0.14	48 0.20	28 %9	17 %7	8 %3	5 %2
Scientific citation to sources and author of information adapted from a scientific paper	12 %5	18 %7	27 0.11	38 0.16	41 0.17	45 0.19	20 %8	23 0.10	9 %4	9 %4
		Standard 3 Evaluating information								
Validation of written	7 %3	5 %2	21 %9	35 0.14	37	58 0.24	31	26 0.11	13 %5	9 %4

Received 26/06/2018
Approved 02/07/2018

information in terms of credibility, publisher and reliability					0.15		0.13			
Evaluating written and electronic information in terms of modernity, scientific validity, and relevance to its subject	1 0.500	9 %4	27 0.11	38 0.16	36 0.15	51 0.21	28 0.11	30 0.12	17 %7	5 %2
Copyright and intellectual property in the production and use of information	12 %5	12 %5	22 %9	37 0.15	45 0.19	48 0.20	18 %7	28 0.12	12 %5	8 %3
Understanding the meaning of plagiarism	11 %5	21 %7	29 0.12	25 0.10	29 0.12	57 0.26	27 0.11	24 0.10	13 %5	6 %3
Familiarity with note	6 %3	10 %4	20 %9	26 0.11	41	58 0.24	33	30 .012	9 %4	9 %4

Received 26/06/2018
Approved 02/07/2018

taking from a written reference					0.17		0.14			
		Standard 4 Organizing information								
Familiarity with the literary editing of a text	9 %4	10 %5	30 0.12	34 0.14	33 0.14	50 0.21	26 0.11	30 0.12	11 %5	9 %4
Organizing and combining different elements gathered from references	6 %3	12 %5	20 %8	33 0.14	37 0.15	54 0.22	31 0.13	26 0.11	15 0.7	8 %3
Reference and introduction, table in the context of a scientific paper	8 %3	9 %4	19 %8	28 0.12	42 0.17	63 0.26	30 0.12	0.11	10 %4	5 %2
Writing a list of scientific sources based on	13 %5	16 %7	32 0.13	40 0.16	29 0.12	48 0.20	26 0.11	22 0.10	9 %4	7 %3

Received 26/06/2018
Approved 02/07/2018

scientific styles										
Ethical and legal provisions for the dissemination of confidential and private information of individuals and ...	4 %2	13 %5	24 0.10	27 0.12	38 0.16	57 0.24	33 0.14	29 0.12	11 %5	7 %3
Policies and socio-political impacts of production and dissemination of information on the Internet	4 %2	16 %7	17 %8	32 0.13	41 0.17	52 0.21	26 0.11	25 0.10	21 %9	8 %3
		Standard 5 Exchanging and propagating information								

Received 26/06/2018
Approved 02/07/2018

Ability to find research topic	10 %5	10 %5	6 %7	21 %9	46 %19	66 0.27	21 %9	25 0.10	16 %7	11 %5
Defining and describing the chosen topic of research	5 %2	2 0.009	18 %7	25 0.10	338 0.16	55 0.23	39 0.16	42 0.17	9 %4	9 %4
Determining the main question of the subject of the research	5 %2	6 %3	17 %7	21 %9	41 0.17	61 0.25	33 0.14	34 0.14	14 %6	10 %5
Determining the Sub-question of Selected Subjects Research	4 %2	2 0.008	14 %6	27 0.11	48 0.20	66 0.27	33 0.14	30 0.12	10 %4	8 %3
Determining the keywords of the selected topic	2 0.008	5 %3	13 %6	23 0.10	41 0.17	59 0.24	39 0.16	33 0.14	4 %6	13 %5

Table 2- the mean score and median of students' information literacy separated by gender

Received 26/06/2018
Approved 02/07/2018

The variable of	Gender	Number	Quarters			interquartile deviation	Mean score	P-value
			first	median	third			
standard 1:	Man	109	2.80	3.40	3.80	0.50	133.89	0.012
standard 2:	Man	109	2.62	3.12	3.62	0.50	132.29	0.030
standard 3: evaluating	Man Woman	109 133	2.50 2.25	3 3	3.75 3.25	0.75 0.50	133.33 112.62	0.029
standard 4: organizing	Man Woman	109 133	3.14 2.42	3.14 3.6	3.62 3.28	0.24 0.43	134.28 111.03	0.010
standard 5:	Man	109	2.83	3.33	3.83	0.415	132.22	0.031

Table 3- analyzing the information literacy of students separated by faculty based n standards

The variable of	Faculties	Number	**Quarters**			interquartile deviation	Mean score	P-value
			first	media	third			
standard 1: recognizin	Medicine Paramedica	78 34	2.60 2.75	3.20 3.20	3.45 3.60	0.425 0.425	113.72	0.624
standard 2: informatio	Medicine Paramedica	78 34	2.46 2.13	3 2.85	3.40 3.50	0.47 0.685	115.73	0.710
standard 3: evaluating	Medicine Paramedica	78 34	2.25 2.25	3 3	3.25 3.75	0.5 0.75	114.66	0.658
standard 4: organizing	Medicine Paramedica	78 34	2.28 2.42	3 2.92	3.42 3.42	0.57 0.5	110.79	0.162
standard 5: exchanging	Medicine Paramedica	78 34	2.50 2.83	3 3.25	3.50 3.66	0.5 0.415	108.54	0.256

Table 4- Spearman table

	gender	**educational grades**	**field of study**	**educational semester**
information literacy Sig (2-taiiled)	-.176** 0.006	0.067- 0.300	o.48 0.457	0.96- 0.132

Received 26/06/2018
Approved 02/07/2018

Revista Publicando, 5 No 16. (1). 2018, 561-580. ISSN 1390-9304

Discussion and conclusion

The current study evaluates the rate of students' familiarity with 5 standards of higher education information literacy ACRL that have been confirmed by the Committee Association of Research Libraries and Colleges at the Summit on January 18, 2000 and the aim is determining the rate of students' information literacy in Kermanshah University of Medical Science with these performance indicators.

Given the obtained data and conducted analyses, the median of information literacy of statistical population of students in Kermanshah University of Medical Science was 3.10 more than median level. Students' familiarity with information literacy separated by medicine, nursing and health faculties in each one of information literacy standards was in median range and more than 3 but in para-medicine faculty in standard 2: information location and standard 4: organizing information were respectively 2.85 and 2.92 lower than median 3. A significant difference was observed between the mean score of information literacy and gender in all 5 standards of higher education information literacy ACRL (P<5%) directed to male's information literacy superiority.

The obtained results of abovementioned findings are not consistent with the conducted studies by Masoumeh Bandpazir (2010) (15), Vida Safouri (2011) (10), Elham Amiri and Mozaffar Sohrabi (2011)(19), Marzieh Siamak and Khadijeh Nodoshan (2011)(20), Hadi Lotfnejad et al (2007), Firouz Amani and Roghayeh Tafaroji (2013)(16) and Fereydoon Yazdani (2012) that each one had reported the level of information literacy in their study population in average and low-average level and Farzad Faraji Khiavi et al (2012) and Adel Zahed et al (2011) who argued that the level of girl students' information literacy has been more than boys. The information literacy of this finding is more than previous studies. Different years of research, statistical population and the used tools can be mentioned as the reasons of this difference. The level of girl students' information literacy was less in this study. It might be because lack of computer facilities and the tools of accessing to internet in dormitories and pavilions of students and also the limitation of commuting to coffee nets.

In comparison with conducted studies by Monavar Naderi et al (2013) (12), Adel Zahed et al (2013) (16), Hassan Asrafirizi et al (2014) (18) that each one had reported the level of information literacy in their population as high average, this study was consistent and supported by them.

Received 26/06/2018
Approved 02/07/2018

Conclusion

The mean of students' information literacy in Kermanshah University of Medical Science was 3.10 upper than median limit. The students had equal information literacy but in all standards, the information literacy of girls was less. This study hasn't been investigated due to the shortages of students' information literacy but its main reasons include lack of computer facilities and the tools of accessing to internet in dormitories and pavilions of students and also the limitation of commuting to coffee nets. The study is recommended to be conducted with more sample volume and the reason of low information literacy is better to be studied in terms of gender.

Acknowledgement

I appreciate clinical development research center of Imam Khomeini Hospital and Mohammad Kermanshahi in the University of Medical Science for their support and cooperation during period of study.

References:

1. Shareif A, Eslamieh F. Assessing Students Information literacy standards[persian]. Jour of Information & Communication in Edu. Sce. [serial online]. 2011; 2(2): [37]. Available at: http://www.ensani.ir/storage/Files/20130914143931-9553-26.pdf
2. Nazari M. Information Literacy. Tehran; Specific document and information center, 2005, 14-17.
3. Nazari M. [Design article test, performance and information literacy evolution for master degree library literacy evolution for master degree library and information science (Persian)]. Available at: http//:www.said.ir.fa.vewssid.pdf.7513853403.pdf. [cited Des 9 2017].
4. Eossareh F. [Information literacy or necessary skill for students to access,use,user learning and information literacy expansian at libraries.mosum and Mashhad information centers. Mashhad]: s.n., 2004. [p. 156,215-222].
5. Mansuri Y. [information literacy (persian)]. 2010. Available at: http://www.ensani.ir/storage/Files/20120426170734-5183-74.pdf. [1 Aug.2017].
6. Ashrafirizi A. Hasanzadeh D. Kazempour Z. [The Rate of Media and Information Literacy among Isfahan University of Medical Sciences' Students Using Global

Received 26/06/2018
Approved 02/07/2018

Framework on MIL Indicators. Health Inf Management (persian) [serial online]. 2014; 11(4): [p. 434-424]. Available at: http://www.sid.ir/FileServer/JF/76513933804. [cited Apr 21 2014].

7. Oconner L.Carolyn J. Radcliff A. [Assessing Information Literacy Skills: Developing a Standardized Instruments (Persian)]. ACRL Tenth Conference [serial online].2001 May 15-16; [p.163-174]. Available at: https://pdfs.semanticscholar.org/cf0e/8096f6a193e3ea84a1369d5e08c5e9022942.pdf. [Cited Des. 4 2017].
8. Critchfield R. The Development of an information Literacy indicator for incoming college freshman. Nova: Nova Southeastern University. 2005; Available at: http://www.critch.us/CILI/CritchfieldInformationLiteracyIndicator2005.pdf [Des. 25 2017].
9. Yazdani F. [Designing an Instrument for Assessing the Students' Information Literacy at Payam-e-Noor University(persian)]. Quarterly of Communication & Information Technical [serial online].2012 ; 2(4): [29-52, 36]. Available at: http://ictedu.iausari.ac.ir/article_2759_d5439ff84b2eb4926e1497700d43e285.pdf [Des 17 2017].
10. Safori V. [Kermanshah Razi University Final year students information literacy(persian)].Chapters Nezamha & information services [serial online] .2011 ; 1(1) : [p. 95-108]. Available at: http://shamseh.aqr-libjournal.ir/article_49765_88988403c141eead3177551e13792e06.pdf [cited Des 3, 2017].
11. Pandpazir M,Sohrabi M. [Study information literacy of Kermanshah University Medical Sciences Students of Supplementary education based on six great skill Isenberg &berquites (persian)]. Resaerch and Specific Quarterly of Countery Public Libraries [Serial Online]. 2017 ;6(2): [115-130]. Available at: http://www.sid.ir/FileServer/JF/600791390010 [cited Des3 2017].
12. Naderi M, Sharabadi E, Razaeian M, ahadavi M. [Evaluation of the Information Literacy of the Student at Rafsanjan University of Medical Sciences year 2010 (Persian)]. Journal

Received 26/06/2018
Approved 02/07/2018

of Rafsanjan University of Medical Sciences [Serial online]. 2011; 12(8): [p.633-638]. Available at: http://journal.rums.ac.ir/article-1-1100-fa.pdf [cited Jan 22 2017].

13. Amani F.Tafarroji R. [Information literacy level and Access to information resources under web skills in Ardabil University of medical sciences students in 2012-13 (persian)]. Journal of medical education Development [Serial Online]. 2011. ;7(4): [p.1-10]. Available at: http://www.zums.ac.ir/edujournal/browse.php?a_id=242&sid=1&slc_lang=fa [cited Nov 9 2017].
14. Association American Library. [Information Literacy Competency Standards for Higher Education. ACRL Associtation of College & Research Libraries (persian)]. Available at: http://www.ala.org/acrl/standards/informationliteracycompetency. [Cited: AUG 6, 2016].
15. Lotfnejadafshar Hadi .Habibi S . Firooze Gaderipakdel F. [Evaluation of Urmia Medical students knowledge of Computer and Informatics.(persian)]. Health Information Management [Serial Online]. 2007: 4(1):[33-41]. Available at: http://www.sid.ir/FileServer/JF/76513860704 [Cited Des 20, 2017].
16. Zahed A. Rajabi S. [Survey Status University Students Information Literacy (Persian)]. Journal Research Technical Education[Serial Online]. 2011 ; 5(4): [309-316]. Available at: http://jte.srttu.edu/article_280_0a4a136ac02c7193fa8b8035c065a0c6.pdf [Cited Des 25, 2017].
17. Faraji Khiavi F. Zahiri M. [Information Literacy Among Undergraduate Students Health Services Administration in Ahvaz Jondishpour 2013: based on Sconul Seve Pillar Model 2013 (Persian)]. Journal para-medical of University Medical Sciences. 1392; 8(2): [Available at: http://payavard.tums.ac.ir/browse.php?a_code=A-10-1-67&sid=1&slc_lang=fa [Cited Des 16 2017].
18. Ashrafirizie H. Hassanzadeh D. Kzempour Z. [The Rate of Media and Information Literacy among Isfahan University of Medical Sciences' Student Using Global Framework on MIL Indicators (Persian)]. Health Inf Manage[Serial Online]. 2014 Apr; 11(4): [p. 434-424]. Available at: http://www.sid.ir/FileServer/JF/76513933804 [Cited Des. 9 2017].

Received 26/06/2018
Approved 02/07/2018

19. Amiri A. Sehorabi M. [A study on students ' information literacy last year, Iran University of science & technology Arak branch in the digital environment (Persian)]. Fasel-namea Information Technology [Serial Online]. 2011 ; 4(13): Available at: http://www.sid.ir/FileServer/JF/6002913901306 [Cited Des 6 2017].
20. Siamak M. Nodoushan Kh. Khalighi N. [Measurement of the information Literacy Level in the student of Qom Univesity of Medical Sciences During 2010 (Persian)]. Qom Univ Med sciences[Serial Online]. 2013; 7(2): [p.23 30t]. Available at: http://journal.muq.ac.ir/browse.php?a_id=253&sid=1&slc_lang=fa [Cited Mar 5 2016].
21. Nomeni M. Valizadeh S. Ghorbani R. [A survey on the information literacy of final-year students studying at Semnan University of Medical Sciences (persian)]. Koomesh [serial online]. 2014; 15(4): [502-510]. Available at: https://koomeshjournal.semums.ac.ir/article-1-2077-fa.pdf [Cited Des 13 2017].
22. Yazdani F. Designing an Instrument for Assessing the Students' Information Literacy at Payam-e-Noor University. Quartery of Communication & Information Technical [serial online] 2012; 2(4): 29-52،36]. Available at: http://ictedu.iausari.ac.ir/article_2759_d5439ff84b2eb4926e1497700d43e285.pdf [cited Des 8 2017].
23. Baro E. [information Literacy among Undergraduate students in Niger Delta University (Persian)]. Electron Lir.[serial online]. 2009 ; 27(4): [675-669]. Available at: http://www.emeraldinsight.com/doi/full/10.1108/02640470910979606 [Des 14 2017].
24. Lotfnejadafshar H. Habibi S. Ghaderipakdel F. [Evaluation of Urmia Medical Students Knowledge of Computers and Information (Persian)]. Health Information Management [serial online].2007; 4(1): [33-41]. Available at: http://www.sid.ir/FileServer/JF/76513860704 [Des 20 2017].

Received 26/06/2018
Approved 02/07/2018