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Amir Reza Asnafi

Information Science and Knowledge Department, Shahid Beheshti University, aasnafi@gmail.com

Mohsen Hajizeinolabedini

Shahid Beheshti University, zabedini@gmail.com

Faezeh Ahmadipour

Shahid Beheshti University, faezeahmadpor@gmail.com

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Faezeh Ahmadipour

MA Information Science and Knowledgd, faezeahmadpor@gmail.com

Mohsen Hajizeinolabedini

**Faculty member of Information Science and Knowledge Department, Shahid Beheshti
University, zabedini@gmail.com**

Amir Reza Asnafi

**Faculty member of Information Science and Knowledge Department, Shahid Beheshti
University, aasnafi@gmail.com**

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Abstract

Access to the required information in all available scientific disciplines is one of the most important factors in the survival of that field. In the architecture field, the type of information format differs from other disciplines. In this field, images are important for performing architectural activities as well as training. The purpose of this study was to identify the behavior of image in the architecture of Shahid Beheshti University. Therefore, by reviewing related retrieval texts, information behavior, image retrieval, and architecture, the discovery of the importance of the image in this field and the features of image retrieval and image retrieval solutions were addressed. The present study is an applied target and descriptive survey method. The statistical population of the study consists of two groups of students and professors in architecture of Shahid Beheshti University. The number of professors and students in the field of architecture was 1262, and it was not possible to examine all of the group members, so they were sampled from the community. To determine the sample size, the Cochran formula was used and the sample size in this formula was 296, but slightly more than the sample size, 300 questionnaires were distributed. After collecting the questionnaires and analyzing the responses, SPSS software was used to identify the characteristics of the behavior of the specialists in the field of architecture. The results showed that the architects mainly used images for identifying creative and the use of details of architectural structures. In order to identify the need for images, they are required mainly used social networks, specialized search engines, specialized image databases and consult with their professionals. The type of image content they used was mostly photos, maps and charts. Find them in engines and image databases by limiting the size of the image and following related links as long as the image was taken. One of the major obstacles in finding images for architects was the lack of familiarity with the way they were searched. Creativity, proximity to the subject, the credibility and quality of the images were the criteria for selecting content. Easy to use and easy to navigate was the main criterion for selecting the content delivery site. The amount of library utilization and its services by architectural experts were as acceptable as the use of search engines and the Internet, which requires the planning and development of services for the benefit of library architects.

Keywords: Architecture, Image seeking, Information Behavior, Shahid Beheshti University

Introduction

Image is very important because of its application in various sciences. This medium can be used alongside the text and help readers to understand the information (Rui, Huang, Ortega, Mehrotra, 1998). Several areas such as medicine, art, architecture, etc. use images in various methods. Therefore, the image is very important for these disciplines. Despite the importance of information for architects, especially when implementing design projects, few studies have been published on their needs and behavior. In the present research, it has been attempted to examine the behavior of specialists in the field of thematic architecture.

Research objectives

- Identifying types of usable visual content for architecture professionals
- Identify the use of architecture professionals in the use of general search engines to meet visual needs
- Identifying barriers to finding an image from architects' perspective

- Identifying the contribution of library resources in architectural imaging

Research Questions

1. What are the types of image content usable by Architecture professionals?
2. What kind of search engines are used by Architecture professionals for image seeking?
3. What are the barriers to finding images in Architecture field?

Research Literature

Image-seeking preferences among undergraduate novice researchers is the title of an article written in 2010 by Bridges & Edison-Morton. In this article, image search priorities and imaging behavior of undergraduate students at Oregon State University are reviewed by a survey. These image searches were for class assignments. Most of them stated that they use Google to search for the image they need, and only 9% use libraries, archives or librarians.

Schlak (2010) studied on two topics in the field of retrieving image in information seeking. This research indicated that information motivations of users can play a key role in image retrieval and it is information motivation that can determine strategy when searching.

Research by Chang and Yun (2011) showed that most students use Google and Google Image Search Engine to meet their needs because of their desire to become more familiar with them and its good user interface. The type of needs of each student varies, which can affect the outcome, their visual needs may be associated with the text, or just the image in question.

Huang & Kelly (2013) conducted research on Chinese students. In this study, they examined the search behavior and image information needs of these students on a daily basis. They conclude that the university's libraries need to improve their visual services and empower students in information literacy.

Mayer (2015) in an article titled "Serving the Needs of Students in the Performing Arts: A Case Study", explored what information needs these students have, how their research behaviors are, and how they address them. Their research concluded that improving information services for students could help improve library services.

Campbell (2017) in a study entitled "Information habits of the School of Architecture", concluded that librarians should consider ways to create empirical and inspirational libraries to add value and demonstrate a permanent relevance to evolving information. Appleton, Grandal Montero & Jones (2017) explored a creative approach in the library to enhance the information literacy of art students. Their research showed that the training given to users to enhance information literacy in traditional libraries is not enough for art students. Their training should use creativity and ingenuity.

Research Methods

The present study is of applied purpose and descriptive survey method. The statistical population of the study consists of students and professors of architecture at Shahid Beheshti University. The statistical population of current research are 1,262 scholars of Architecture at Shahid Beheshti University include student and faculty members. Cochran formula was used to determine sample size. Thus, the sample size in this study was 296 individuals. The research tool was a researcher-made questionnaire based on a literature review. Formal validity was used to validate the questionnaire. To calculate Cronbach's alpha coefficient, 30 questionnaires were distributed among the sample and Cronbach's alpha coefficient was calculated. Cronbach's alpha coefficient for the whole questionnaire was 0.77, which is

acceptable. The collected data were entered into SPSS and analyzed. Frequency indices, percentage and mean were used for data analysis.

Findings

According to Table 1, Instagram has the highest frequency of use. Then there's the Telegram, Facebook, Pinterest. The greater frequency of Instagram could be due to the fact that the network is more text-based than image-based.

Table 1. Frequency of social networks in architecture of Shahid Beheshti University

Name of Social Media	Frequency
Instagram	116
Telegram	65
Facebook	20
Pinterest	11

What are the types of visual content usable by Architecture professionals?

It is important to identify the types of visual content available to professionals in identifying their information needs and identifying their information behavior. Table 2 indicated that Architecture professionals at Shahid Beheshti University used photos

Table 2. Percentage of using types of visual content by Architecture professionals

Type of visual content	Percent
Photo	62.2
Map	40.2
Infography	10.8
Watercolor Painting	6.8
Chart	12.8

The results of Table 1 indicated that the architectural experts of Shahid Beheshti University are more likely to search for photos in their studies. The use of maps, infographics, watercolor paintings and charts were among the next priorities for Architecture professionals.

What kind of search engines are used by Architecture professionals for image seeking?

Table 3 shows that Google image search engine with frequency of 62.8 % is the most used by Architecture professionals for image seeking. More use of this search engine is probably due to the ease of search environment and the ability to filter by size, quality and so on.

Table 3. Percent of using Search Engines by Architectural professionals at Shahid Beheshti University

The rate of using search engines	Very High (5)	High (4)	Medium (3)	Low (2)	Very Low (1)
https://images.google.com	68.2	20.3	6.4	1.0	2.8
https://images.search.yahoo.com	5.4	13.2	13.9	15.9	41.2
https://www.bing.com/images	1.7	9.1	15.2	15.9	48.0
http://www.excite.com	1.7	4.1	7.8	13.2	62.5
https://www.flickr.com	4.1	10.5	13.5	12.2	52.0
https://www.lifeofpix.com	3.4	4.4	8.1	13.2	62.8
https://ar.picsearch.com	3.0	7.4	8.4	9.5	63.5
https://www.tineye.com	2.7	3.4	7.1	10.1	68.6

According to Table 4, the significance the categories levels of using search engines for image seeking are more than 0.05. In other words, there was no significant difference between the two students and faculty members at Shahid Beheshti University.

Table 4. Kruskal-Wallis test results to measure differences between students and faculty members in the use of image search engines

stock.adobe.com	bigstockphoto.com	freeimages.com	alamy.com	istockphoto.com	tinEye.com	ar.picssearch.com	lifeofpix.com	flicker.com	excite.com	bing.com	images.search.yahoo.com	images.google.com	Test statistics
1.543	0.811	1.742	0.285	1.825	1.343	0.138	2.867	0.858	0.85	1.386	1.474	3.858	Chi-Square
2	2	2	2	2	2	2	2	2	2	2	2	2	Degree of Freedom
0.462	0.667	0.419	0.867	0.402	0.511	0.934	0.238	0.651	0.959	0.500	0.479	0.145	Significance Level

What are the barriers to finding images in Architecture field?

According to Table 5, the greatest obstacle to image retrieval, according to the experts in the field of image retrieval, is the "lack of familiarity with how to search image databases." Of course, considering the nearness of the mean and all of them above the mean level, it can be said that all of the items mentioned in the questionnaire were barriers to information retrieval.

Table 5. Frequency Distribution of image seeking barriers in Architecture at Shahid Beheshti University

Image seeking barriers	Very High (5)	High (4)	Medium (3)	Low (2)	Very Low (1)
Not familiar with search strategies	27.7	86	66	20	36
Not familiar with image websites	76	96	52	38	28
Not familiar with image search engines	79	88	65	23	36
Not familiar with other languages	63	67	63	56	42
Scattering images in different carriers	40	71	105	58	16
Not having access to information resources	62	58	79	55	31

Conclusion

The study indicated that the most common use of search engine images is from Google's search engine. Given the low usage of other search engines, it can be concluded that Google's applications and capabilities are more than other image search engines, as Chang and Yoon (2011) research confirms that this search engine is highly used. Other reasons for using it may be that the search engine is more familiar to architecture professionals. After Google, the use of websites was particularly important, given the focus of some websites and the provision of comprehensive textual information along with the image, making it a prominent image recognition resource in the field of architecture. Another image recognition source cited for image retrieval was social networking, which seems to have been widespread and aimed at finding new ideas and creatives that have benefited from social networking

for image retrieval. The library is another source of image recognition used by more than half of the respondents, which is lower than Google and social networks, which may be due to the lack of many visual information resources and the inadequate retrieval of library resources, making it difficult to retrieve. Library resources to find visual information. According to the opinions expressed by specialists in the field of architecture, it can be said that more attention has been paid to the image. The map and graph are also basic contents in the field of architecture, which is particularly important given the views expressed. Painting and infographics may have been less important to architects because of the lack of visual detail. According to the opinions expressed by specialists in the field of architecture, it can be said that more attention has been paid to the image. In current research Architecture experts said that lack of information about image search methods and lack of familiarity with other languages is another important factor that impedes image search. Since one of the tasks of libraries is to teach information literacy to their users in their research fields, it can be argued that either the service is not provided or the study group does not go to the library for training.

In a study conducted by Huang and Kelly (2013) and Mayer (2015), library services and information literacy services were improved, which was in line with the findings of the present study, but their differences with the present study were studied. Campbell (2017), Appleton, Grandal Montero, and Jones (2017) also emphasized the role of librarians in creating creativity to identify patrons' needs, similar to the present study. According to architecture experts at Shahid Beheshti University, librarians' viewpoints were not important for understanding the visual needs of architecture, which may be due to the librarians' inability to retrieve information. Therefore, it is recommended that programs be held to familiarize the librarians with specialized skills and knowledge. The library organizes training classes focusing on the special needs of the field of architecture and educates professionals on how to use these engines and databases. Given the role of libraries in retrieving research-based images, it is suggested that librarians and librarians take steps to prepare brochures, conferences, library visit courses, and workshops in order to raise awareness of university research groups. Therefore, it is recommended that programs be held to familiarize the librarians with specialized skills and knowledge. The library organizes training classes focusing on the special needs of the field of architecture and educates professionals on how to use these engines and databases. Given the library's contribution to retrieving images based on research data, in order to enhance the role of the library, it is suggested that librarians and librarians undertake awareness raising activities for university research groups such as brochures, conferences, library visit courses and workshops.

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