The Study of the Main Characteristics of Digital Libraries in Iran
Part 1: The Situation in 2009

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Abstract

The present research endeavors to discover similarities and differences among digital libraries in Iran and to clarify the extent of their consistency in terms of main library requisites. Using a qualitative -quantitative method, i.e. a survey research method using content analysis, it identifies Iranian Digital Libraries (IDLs) and explores their characteristics. Reviewing the literature, we identified the main requisites for libraries including search and browsing facilities, search mode, collection development policies, content, document types, feedback, access models and services and then composed them into a checklist. Searching Google, we verified the top 500 of the records returned to identify IDLs and study them regarding the criteria. The results showed that the IDLs vary strongly in their main traits and library requirements, signifying a general variation in their developers' interpretations of digital library concept. The strong points of the IDLs are their variety in contents, materials and subjects covered as well as in devising browsing facilities, multilingual collections and feedback mechanisms. However, they showed to be deficient in providing a variety of services, search and management mechanisms. The significance of the research relies on the importance of commonly agreed perceptions of digital libraries on their future success. It affects the nature of the relationships between information users, providers and intermediaries as well as their designing, implementation and resource, access and legal management and the services types and extents.

Keywords: Digital Libraries, Iran.

Introduction

Witnessing a rush towards internet services over the past decade, Iran has been hosting an increasing number of information entities in its cyberspace, commonly called libraries. They partly represent the web presence of Iranian libraries and information centers, displaying a broad continuum from simple homepages introducing traditional libraries

through interfaces to electronic services of automatized ones to organizationally established modern information and research centers (such as *Irandoc*[1] and *Regional Information Center for Science and Technology*[2]). Digital libraries provide various services and collections such as e-books (e.g. *Shiraz University Digital Library*[3]), digitized resources (e.g. *Payam-e-Noor University Digital Library*[4]) or portals to commercial databases (e.g. *Integrated DL*[5]), and multitude of library services (*Central Library of Tehran University*[6]). In addition to the previously mentioned official representations of the already-established modern or traditional libraries, there exist a high number of electronic (ELs), Virtual (VLs), or digital libraries (DLs), not necessarily based on an institution nor having a physical location.

Statement of the problem

At the first glance, we would expect Iranian web-entities called "libraries" to not only reflect the already-known features of real libraries, but also be as various in their natures as they are in their types claimed, i.e. ELs, VLs and DLs. However, we would hesitate when bearing in mind the universal lack of a scientific consensus on the definitions, borders, scopes and characteristics of contemporary libraries, causing them to be ambiguous either in their natures or in their borders with differently termed otherwise similar entities (Borgman, 2002; Cleveland, 1998; Saracevic, 2000; Watstien, Calarco & Ghaphery, 1999).

The concept crisis, representing the basic challenge DLs have been confronting, dates back to the early days of their life and persists during their evolution from research to practice and from prototypes to operational systems (Borgman, 2002). The verification of the definitions provided in the related literature, reveals that they commonly vary in their approaches towards DLs. They select a wide range of focal points from organization to technology and system, from machinery facets to user-related aspects and from resources to services. However, some admit a combination of the approaches (Borgman et al., 1996; Cleveland, 1998; Duguid, 1997; DL Federation, 1999).

The multitude of definitions, mostly being divergent from each other (Schwartz, 2000) and sometimes different from the common concepts of library, signifies an obvious disagreement in literature implying a lack of universal consensus. It blurred the nature of DLs and especially its borders with other manifestations of modern libraries such as virtual and electronic ones (Watstien, Calarco & Ghaphery, 1999; DL Federation, 1999). The confusion has its roots in some factors including use of different terms to denote a unique concept and vice versa, involvement of many different areas of research, divergence of research and practice communities in their approaches to DLs and finally, application of the term to many things on the internet (Cleveland, 1998; Borgman et al., 1996; Saracevic, 2000).

To clarify the situation of Iran we carried out a research to investigate the main traits of what has been called the digital, electronic or virtual libraries to assess the overlap among differently termed entities as well as the divergence among similarly termed entities. The present communication presents a section of the research results focusing on DLs.

Review of Literature

Verifying the literature related to DLs, one may come across a wide number of contributions theoretically reviewing or discussing the characteristics of DLs (Bawden & Rowlands, 1999; Borgman, 2002; Chowdhury & Chowdhury, 1999; Duguid, 1997; Saracevic, 2000). There also exist some instances looking into the related literature regarding their convergences and divergences in this matter (Joint & Law, 2000; Watstien, Calarco & Ghaphery, 1999; Schwartz, 2000). However, there are no empirical investigations directly focusing on and contrast the characteristics of real and operational instances of different kinds of modern libraries.

In spite of searching a wide range of the related literature, we found no research directly aiming at clarifying the characteristics of IDLs. To mention some indirectly relevant instances, we may refer to investigations reporting development of a DL, a tool, or a collaboration network (Khosravi &Vazifedoost, 2007; Heidari Beigvand & Fakheri, 2009; Naghshineh & Fahimnia, 2003). Some else deal with Iranian libraries experiences with the application of new information and communication technologies (Davarpanah, 2001; Farajpahloo, 1999; Gharibi, 1995; 2000; Mohsenzadeh & Isfandyari Moghaddam, 2009; Nakhoda, 2005; Ramzan, 2004).

Given the lack of knowledge about Iranian developers and designers' perceptions on modern libraries, we found it necessary to carry out a research to explore and compare the characteristics of Iranian modern libraries. Moreover, it is necessary to clarify whether these libraries enjoy integrity and consistency in terms of the main requisites of libraries.

Research Objectives

The main objective of the present study is to identify the extent to which the IDLs are provided with the DLs' main requisites identified and extracted from the related literature. To do so, it tries to investigate the IDLs' characteristics regarding:

1. Facilities and services including search and browsing facilities, variety of contents and services, access models and feedback system;
2. Subject scopes;
3. Languages covered;
4. Types of materials, formats and media; and
5. Organizational affiliation.

Research Significance

The significance of the research lies on the importance of an unambiguous and undisputable identity assigned to DLs. The differences observed in modern libraries, though scarce in number, could significantly affect different aspects of decision-making, designing and implementation of DLs and differentiate them regarding their principles of resource, access and legal management as well as the services types and extents. Consequently, attempting to study the basic assumptions underlying the DL concept does not merely represent a problem of academic hair-splitting. It affects the ability of funding agencies, researchers and practitioners to reach a common understanding of aims and objectives and hence play a role in the successful future development of library services (Bawden& Rowlands, 1999).

Research Questions

In order to achieve the above-mentioned aims, the present study tries to address the following questions:

1. To what extent are DL main requisites—providing search and browsing facilities, variety of content and services, access management and feedback system—envisaged in designing IDLs?
2. How is the subject scope of IDLs?
3. What are the languages covered by IDLs?
4. What are the types of materials, formats and media observed in IDLs?
5. Are the IDLs rather created individually or institutionally?

Research Method

The present study used a qualitative-quantitative method including a survey method using content analysis. In order to explore and extract the characteristics of the IDLs, we analyzed the content of the identified libraries' web pages. We also tried to test the services and facilities offered through direct observation of the websites as authorized by the access policies of the libraries.

Data Gathering

Determining DLs' main requisites

Given their dynamic, multifaceted and multi-choice nature, it is difficult if not impossible to have a commonly agreed definition, framework or realistic model for the DLs (Borgman, 1999; Bawden & Rowlands, 1999). Consequently, we verified the literature to choose the most common features and exclude the disputable ones. For instance, "ownership and control" and "persistence" of collection contrast with provision of pointers to internet resources, internet resources collection building or websites descriptions (Cloete,

2000; Yang, Qiaoying & Rongrong, 1997; Schwartz, 2000; Cleveland, 1998). Since a library does not necessarily own internet resources, it can by no means guarantee their preservation, quality stability and long-term persistence. While some consider distributed networks as just the facilitators of library processes and services (Cleveland, 1998), some insist that they are the only carrier of materials (Borgman et al., 1996; Chowdhury & Chowdhury, 1999). The organizational structure and its effect on material and service types is another differentiating point (Joint & Law, 2000). Excluding the disputable features, we chose the following criteria as the main requisites of DLs: providing access to digital materials, collection development policy, organization, searching and browsing facilities, feedback, access models and management and variety of materials and services. They were composed into a checklist. Five experts confirmed its validity (with an agreement coefficient of 95%).

Identifying IDLs

In order to identify the Iranian "DLs ", “ELs” and “VLs”, we performed separate searches in Persian Google in 2009. As already mentioned, the present communication reports the results related to IDLs. Given the high number of the hits returned by Google (714,000 hits), the research was limited to the most influential ones, i.e. 500 top ranked ones. We also tried to identify more IDLs through web resources and directories[7]. They may be called differently (digital, virtual or electronic) depending on how they are named by the IDLs directories or in their own websites. After excluding duplications, out-of-reach records and web pages not representing IDLs, 59 unique IDLs were identified and verified. The data extracted through content analysis put into Excel for further analysis (Table 1).

Table 1

Status of the top 500 Records Retrieved

Status		**NO**	**Percent**
IDLs	Persian	59	9.52
	Arabic	5	0.81
	English	31	5.00
About DLs		394	63.55
Duplicated		53	8.55
Inactive / Filtered / Limited access		78	12.58
Total[8]		620	100

The content analysis revealed that the websites had provided inadequate information about collection development policy, organization, collection size, and material types -

digital or digitized. As a result, the criteria were excluded from the research to be studied later using a different data gathering method.

Research Results

IDLs ' affiliation

Apart from seven IDLs (11.86 percent), the other 49 libraries (83.1 percent) were institutionally developed of which 32 (54.24 percent) were rather digitally born, i.e. they were not web extensions of a traditional library. The other 17 remaining institutionally supported libraries (28.81 percent) aim to introduce or facilitate access to the collection of an already-established library (Table 2).

Table 2

The IDLs Affiliation

Status		NO	Percent
Individual		7	11.86
Institutional affiliation	Digitally born	32	54.24
	Extension of traditional libraries	17	28.81
NA		3	5.08
Total		59	100

The IDLs ' subject scope

Table 3 summarizes the subject scope of the IDL collections, categorizing them into two broad classes. "Special collection" refers to those completely or mostly dedicated to a single field. "Non-special" denotes multi-subject collections whether scientific - such as Medicine, Economics, Management- or general -such as entertainment and sports. The best examples of non-special scientific IDLs are those affiliated to universities or scientific research or educational institutes amounting to 17 IDLs (Table 2).

Table 3

Subject Coverage of IDLs

Subject Scope	Field	NO	Percent
Special	Religion	18	30.51
	Literature	2	3.39
	Computer	2	3.39
	Children and Youth	2	3.39
	Law	1	1.69
	Culture and Art	1	1.69

Subject Scope	Field	NO	Percent
	Science	1	1.69
	Politics and Religion	1	1.69
Non-Special		28	47.46
NA[9]		3	5.08
Total		59	100

Religion is the widest subject covered so that the religion-related libraries yield the highest percentage (30.51%). The non-special libraries showed to have almost all subjects in common with the special ones. Given the high overlap between the coverage of the two library types, the results are not reported.

Search and browsing facilities

26 (44.07%) of the IDLs were revealed to provide no kinds of search facilities, not even linking to general search engines. 33 IDLs (55.93 percent), including 14 institutional ones, provide search facilities mostly through proprietary search engines and in some cases using general search engines such as Google and Yahoo. The search facilities include simple search mode (in 12 libraries) and both simple & advanced search modes (in 21 ones). On the contrary, browsing is a commonly adopted feature by the IDLs so that few instances (9 accounting for 15.25 percent) lack any kind of browsing facilities, mostly being deficient in search facilities too. 18 IDLs allow browsing through subjects and 30 ones through subjects & titles. (Table 4).

Table 4

The IDLs ' Search and Browsing Facilities

Search		NO	Percent	Browsing		NO	Percent
Search facilities	simple search	12	20.34	Browsing facilities	Subject	18	30.51
	simple & advanced search	21	35.59		Subject & title	30	50.85
No search facilities		26	44.07	No browsing		9	15.25
Total		59	100	Total		59	100.00

Content and material types

The IDLs generally provide a combination of different contents including URLs, abstracts, excerpts and selections, bibliographic information and full-texts. Totally, 37 libraries (56.06%) provide full texts of which 25 are completely devoted to full-text provision (Table 5).

Table 5

IDLs' Contents and Materials

Type of Content	NO	Percent	Type of materials	NO	Percent
Abstracts	5	6.41	Book	40	45.98
Bibliographic Information	11	14.10	Article	12	13.79
Excerpts	2	2.56	Journal	10	11.49
Full-texts	37	47.44	Link	5	5.75
Links to /lists of online resources	10	12.82	Picture	2	2.30
All content types	2	2.56	Other types	5	5.75
Other types	1	1.28	More than 3 kinds	13	14.94
NA	10	12.82			
Total[10]	66	100	Total[2]	87	100

As expected, almost all the libraries found to provide links whether to internal or external sources. However, 10 IDLs contains links to or lists of external online resources, with 7 being exclusively devoted to the content type. "Other types" refer to the contents provided by those allowing searching websites and CDs at the library building rather than providing networked services.

As seen in Table 5, books, articles, journals and links are the main material types most often offered. Moreover, pictures and "other types" are rarely covered including news, theses, games, software and reports. Based on the table, the IDLs preponderantly provide books in a way that 45.98% of them offer books and 35.39% exclusively deal with book provision. A relatively fair proportion of the IDLs (14.94%) include more than three kinds of materials.

Feedback facilities

The studied libraries devised some mechanisms to get feedbacks from users including "frequently asked questions" (FAQ), "Ask the librarian", comments and contacts. Comments and contacts were provided by 16 (27.12%) and 20 (33.90%) libraries respectively. Offered just by two libraries, Frequently Asked Questions and Ask the Librarian had the least frequency. Among the libraries providing feedback features, just ten (16.95%) offered more than two ways to receive feedbacks. A considerable percent (35.59) provided no feedback facilities (Table 6).

Table 6

The IDLs ' Feedback Facilities

Status		NO	Percent
No feedback		21	35.59
Feedback	Comments	16	27.12
	Contacts	20	33.90
	FAQ and Ask the librarian	2	3.39
Total		59	100.00

Language

As expected, Persian with 43 (accounting for 72.88 percent) of the IDLs is the most frequent language. Sixteen found to cover non-Persian languages, too. They include English, Arabic, French and German (Table 7).

Table 7

The Languages Covered by IDLs

Status		NO	Percent
Persian		43	72.88
Bilingual (Persian and English)		4	6.78
Multilingual	Persian, English and Arabic	5	8.47
	More than 3 language	7	11.86
Total		59	100.00

Services

A majority of the IDLs (38 accounting for 64.41% of total libraries) offered nothing but access to bibliographic information, abstracts and resources. However, the rest (21 accounting for 35.59 percent) provided a variety of information services namely current awareness services, news, announcement and alerts, selective dissemination of information, discussion groups, software bank, the bests in science and literature, most-visited books, questions and answers, chat, reference, recently added items and books. Thirteen libraries provided several services.

Access models and management

Providing open access to materials is a common characteristic of the IDLs. As seen in Table 8, a majority of the IDLs are categorized as entirely OA libraries (90.14 percent). Given the contents of 24 IDLs being restricted to abstracts, bibliographic information or

links (Table 5), the amount of the libraries providing OA to full-texts shrinks to 22 accounting for 37.29 percent of the total libraries.

Table 8

IDLs ' Access Models and Management

Status		NO	Percent
Entirely OA	Without access management system	46	79.97
	With access management system	6	10.17
Semi-OA		4	6.78
Absolutely toll access		1	1.69
NA		2	3.39
Total		59	100.00

In the 4 semi-OA IDLs, bibliographic information and abstracts are freely available, while they restrict access to full-texts by subscription or payment systems. "Not applicable" in the table refers to those providing no contents via their websites or being limited to some internet resources lists.

Regarding the IDLs access management systems, it is evident that the libraries with semi-OA or absolutely toll access envisaged payment or subscription mechanisms to monitor and control the requests. However, as seen in Table 8, those enjoying an entirely OA model mainly lack access management mechanisms (79.66 percent).

Discussion

The IDLs could be divided into two categories of institutionally and individually developed libraries in terms of their affiliations (Table 2). Institutional IDLs are those digitally born libraries enjoying the supports of an institution or being the digital representation of an already-established library. The latter refers to those libraries launching their automated services via Web or calling their computer section or online services and subscribed databases as DL.

The IDLs are mostly affiliated to institutions. Some examples are *Payambar Aazam [The Great Prophet]*, *Reference Library of Motekhasesin e Iran [Iranian Experts]*, *Ahlolbait [The Prophet's Family] DL, Balagh* and *Deed [Insight]*. Some of the institutionally supported libraries such as *IranDoc Library*, *RICeST DL* and the *DL of Iran University of Science and Technology* aim to introduce or facilitate access to the collection of an already established library. Some like *Transportation Research Institute DL, Central Library of Art University*, *Library of Isfahan University of Technology*, *Yazd University of Medical Sciences Library*, *Isfahan Governorship library* and *the Library of Isfahan*, *Jondi*

Shapoor Higher Education Complex are members of the *Payam DL Network*, a library service provider enabling the subscribed organizations to launch their online and network services through web. Being dependent on traditional libraries, one would expect them to enjoy the main requisites of a library. However, the term "DL" represents a wide spectrum of concepts for these libraries, ranging from initial steps towards digital services to libraries providing extensive network services. For example, while *Shiraz University of Medical Sciences EL* just provides links to some search engines or subscribed databases, *IranDoc Library* is comparatively more sophisticated for providing access to its in-house databases such as theses and dissertations, e-articles and journals, conference proceedings etc. Individually developed IDLs include *Adam-o-Hava [Eve and Adam]*, *Daastaan haye Farsi* [Persian Tales], *Ghafaseh [Shelf] Persian* VL, *Mobile DL* and *Zendegi [Life]*.

The IDLs greatly varied regarding their subject scope (Table 3). There are special libraries wholly devoted to a single discipline and its related fields. Some chose a more general and broader subject scope. For instance, *Zendegi* deals with cultural, social, political and historical subjects and *Deed* covers subjects such as law, economics, religion, politics, culture, history and geography, military and defense issues, etc.

The amount of the IDLs specialized in religion is comparatively the highest. They cover a wide range of Islamic subjects including canon laws, ethics, prayers, beliefs, ideology and history of Islam, Tradition, women in Islam, Islam prophet and leaders, sacred books, Islamic culture and civilization, Islamic philosophy and sciences, etc. *Aba-Saleh [the Savior]*, *Payambar Azam, Ghadeer, Zekr [*Invocation*]* and *Balagh* are instances of the religion-related IDLs. The two libraries specialized in literature include *Adam-o-Hava* dealing with tales and stories and *Daastaan haye Farsi* dedicated to Persian stories. *Darya* [The Sea] is the only IDL covering merely scientific subjects in Nano-technology, Biotechnology and Nuclear Science. *Marlik* and *Parsinal* deals with computer field. *Islamic Arts* and *Iran Bar Association Union DL* are the only libraries devoted to culture, arts and law respectively. *The Children and Kids Islamic Network* and *Koodakan [Children] Library* deal with juvenile literature. The *Imam Khomeini and Islamic Revolution Research Center DL* covers the fields of politics and religion.

We tried to categorize the subjects covered by the special and non-special IDLs into more general classes to reach a clearer portrayal of their subject scope. It is worth mentioning that given the limited scope of the subjects, the categorization is rather based on the groupings provided by the IDLs than a classification scheme. Besides, as previously mentioned, the subject coverage of those non-special libraries being affiliated to a mother institution cannot be investigated due to their limited access; however, as they are actually digital representation of another library, they may reflect as extended subject areas as their traditional mother libraries do.

The non-special libraries cover such wide and various subjects as social topics, ethics, literature, economics, medicine, history and geography, commerce, physical education science, accounting, law, religion, psychology, entertainment and sports, health and beauty, politics, mysticism, sciences, humanities, culture, philosophy, computer, financial and commercial management, engineering, electronic publication, armed forces and defense, music, art and miscellaneous items. Based on the data gathered, literature and law witness the least and religion the widest coverage regarding the variety of the subjects offered. Evidently, neither the quantitative extent nor the quality of the collections can be estimated by the amount of the categories covered due to the lack of data on the size of the libraries and their collections. Consequently, further studies are required to determine the coverage extent and quality of the items gathered by the IDLs. Religion, along with politics, and science and technologies, show also to be the most varied regarding the number of subjects covered. However, further studies are required to assess precisely the quantity, quality, and depth of the collections provided in each subject field.

As the most basic and frequent organization mode in a library, browsing was considered by most of the IDLs (Table 4). While a large number of the IDLs allow looking through the items by their subjects, titles or authors, some provide other features such as document type or publisher for browsing. The libraries powered by *Payam digital network* provide good instances in providing browsing facilities. Apart from the common title and subject browsing, other features are employed for looking through the collections. *Ketabshenasi [Bibliography] DL*, as an example, does not provide subject or title browsing, but the publisher and author lists are ready there for browsing. *DL of the Document Center of the IOSTR* allows browsing based on document type.

However, they were proved to more or less deficient in providing search facilities so that about half of them lacked any kind of search engines whether proprietary or general. Among them, there exist 3 institutional IDLs namely *the DL of the Document Center of the Iranian Organization for Scientific and Technological Research (IOSTR), Shiraz University of Medical Sciences EL* and *the Library of Health Faculty of Tehran University of Medical Sciences*. Such a deficiency in these cases is not very far from expectation because as mentioned before, their use of the term "DL" just implies their early attempts to provide traditional services in an online mode. As the first two libraries only contains links to some databases, e-books and e-journals. The third one is an introductory web page about the library services which are only available through the terminals located at the library building. It thus seems that the term "DL" is to signify the computer service section of the affiliated traditional library.

A wide range of the IDLs providing search facilities enjoyed both simple and advanced search modes. For instance, *Deed*, *Ma'arefe Ahlolbayt [The Thoughts of the Prophet's Family]* and *Darya* provide a wide range of advanced search modes such as free-text

searching and field search –including subject, date, type of document, title, main author, publisher, publication year, ISBN and congress classification fields. *Pars Tech* provides both advanced and field search enabling users to restrict their searches to new subjects or books. The IDLs powered by *Payam Digital Network* do also enjoy the simple, advanced and fast search modes. The *DL of Isfahan Science and Research Town* is a good instance providing all the search modes along with the subject-heading search facility.

More than half of the IDLs offer full texts. The rest are rather concentrated on other content types i.e. URLs, abstracts, excerpts, selections and bibliographic information, the latter being the most frequent after full-text (Table 5). Some instances are *Ghadir*, *Zekr*, *Abaseleh*, *Imam Ali library*, *Balagh*, *Howza*, *Pars Tech*, *Ketabshenasi*, *Al-Ghadir*, *Quran Karim Library*, *Iranian Children National Library*, *Doost-e Man Ketaab [My friend, Book]*, *Iran Bar Association Union DL, Marlik*, *Zendegi*, *Payambar Aazam* and *Pars Public DL*. Some libraries try to provide full-texts along with other forms of contents such as excerpts, abstracts or bibliographic information. For instance, we can name *Mobile VL, Parsinal, Ma'arefe Ahlolbeyt, Ketaabkhaneh-ye Electronic, Darya, Islamic Arts, Ghafaseh, Tebyan, IranDoc,* and *SRLST DL*. The libraries covered by *Payam digital network* as well as the *DL of Iran University of Science and Technology* contain just bibliographic information. *Motekhasesin e Iran* provides bibliographic information but, in case of subscription, delivers documents in full-text, too. *Kanoon e Andisheh-ye Javan [Youth Thought Center] EL and Deed* release their contents in the form of abstracts and bibliographic information. *Ketaabkhaneh-ye Electronic [EL]* provides abstracts and excerpts of texts.

Some IDLs were limited to links or lists of resources. They include *Mashhad University of Medical Sciences DL, the DL of the Document* Center *of the IOSTR, Iran Sareh library, Shiraz University of Medical Sciences EL, Ghandchi VL, Adam-o-Hava DL* and *Daastan-haye Farsi VL*. As it is seen, they vary regarding their terminologies (i.e. virtual, digital and EL) signifying a divergent in the perception of modern libraries in Iran even in the case of similar content type.

The IDLs cover a wide range of material types including books, journals, articles, reports, pictures, etc, with books being the most common type. *IranDoc library*, for example, provides users with a collection of books, articles, journals, theses and conference abstracts. *Deed* covers a wide range of materials such as books, reports, journals, articles, interviews and book & software reviews. *Al-Shia* has a lot in common. As expected, text is the dominant medium provided in these libraries. However, a few IDLs e.g. *Darya*, *Ghadir*, *Al-Shia* and *the library of the Children and Kids Islamic Network* offer multimedia such as videos, sounds and image (Table 5).

The results also reveal that the IDLs mostly ignored the feedback facilities. Nonetheless, a large number has provided feedback facilities in form of FAQ, comments,

contacts or Ask the Librarian (Table 6). However, in most cases our failure in getting answers via these services may imply that they are not in force.

As expected, Persian is the dominant language. However, a considerable amount is in two or more languages (Table 7). Amongst them, *Daastaan haye Farsi*, *Ma'arefe Ahlolbait*, *Quran Library*, and *Koodakan* provide materials in both Persian and English. *Mobile VL*, *Darya*, *Islamic Arts* and *Ketaabkhaneh-ye Electronic* provide collections in three languages including Persian, English and Arabic. Both *Marlik* and *Amir Kabir University of Technology DL* cover multilingual resources in Persian, English, Arabic, French, Italian, Spanish, Portuguese, Russian, Indian, German and Chinese.

Variety in library services is one of the fundamental criteria for making optimum use of library collections. The IDLs were found to occasionally provide a wide range of information services including current awareness services, news, announcement and alerts, selective dissemination of information, discussion groups, software bank, the bests in science and literature, most-visited books, questions and answers, chat, reference, recently added items and books. *Pars Tech*, *Ghafaseh*, *Al-Shia*, and *IranDoc Library* are good instances providing multitude of the services. However, the IDLs mostly ignored the services and limited themselves just to document provision services.

The results showed that all the libraries provide somehow open access (OA) to online resources – whether to their own collections or those distributed on the web. They apply a diverse range of access models from entirely OA through semi-OA to limited access (Table 8). Even *the DL of the Document Center of the IOSTR* which is categorized as an "absolutely toll access" provides some links to OA journals. A majority of the IDLs encompass "Entirely OA" model, among them one may mention *Al-Shia*, *Iran Bar Association Union DL*, *Imam Khomeini and Islamic Revolution Research Center DL* and *Balagh* as institutional IDLs as well as *Koodakan*, *Zendegi*, *Mobile VL* and *Ghafaseh as* non-institutional ones. *IranDoc Library*, *SRLST DL*, *Deed* and *Motekhasesin e Iran* are semi-OA, restricting access to their full-texts but providing free access to bibliographic information and abstracts. The IDLs mostly lack access management mechanisms perhaps due to the OA model applied. Amongst those rare OA libraries envisaging access management methods one may mention *Ghafaseh*, *Parsinal*, *Ma'arefe Ahlolbait* and *Marlik* that implemented registration processes to manage the requests. In these IDLs, abstracts and bibliographic information are often freely available while registration is required to access full-texts.

Conclusion

The main general outcome yielded by the research is that the information community in Iran does show a clear inconsistency regarding its members' perceptions of a "DL" so that they show a divergence even in the case of libraries with exactly similar content types. The

variations in their attitudes towards the DL concept led them to develop libraries with substantial differences. According to the results, the IDLs range from simple homepages of traditional or automated libraries through interfaces to subscribed resources to more sophisticated information entities commonly exhibiting library requisites.

Apart from the variation in their interpretation of DL concept, the results showed that not all the developers and designers were sensitive enough about the requirements of "a library"; nevertheless, the IDLs more or less meet the qualifications defined by the present study as the main requisites, though not necessarily at an acceptable level. Variety in contents and materials, wide subject coverage, provision of access to resources through browsing, multilingual collections and feedback facilities are among the strengths of the IDLs. There are also deficiencies such as lack of or shortage in providing a variety of services, search and management mechanisms.

Given the ever-changing nature of the cyberspace and the great enthusiasm for web-based communication in Iran, the situation is constantly evolving and flourishing since 2009. Consequently, a follow-up study is conducting to explore the status-quo in 2011-2012 comparing it to the past.

Notes

1. www.irandoc.ac.ir
2. www.ricest.ac.ir
3. http://dlib.shirazu.ac.ir
4. dlib.pnu.ac.ir/
5. http://www.inlm.org
6. http://dlib.ut.ac.ir
7. *Digital libraries in Iran* (www.goonagoon.nasseh.ir/atcl_iran_digital_libraries.htm) and *Astan-e Qods Library* (http://www.aqlibrary.ir/index.php?module=pagesetter&func=viewpub&tid=21&pid=130)
8. The total number exceeds 500, owing to the duplication of some IDLs in some sources.
9. "NA" implies access limitation, service blocking, or lack of relevant information.
10. 2 The sum exceeds the absolute number of the studied libraries due to the overlap in their content types

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