



Feasibility Study of Websites Cataloging at the National library and Archives of I.R. of Iran (NLAI)

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Introduction

Internet as a global network contains a tremendous variety of resources. The Web is getting more and more extensive and is seeping through the world's remotest countries. It is beneficial in several ways, as it enables users to access the latest world news, to know every detail of an event, to be informed as regards innovation and culture. However, despite its advantages, one has to cope with some problems and challenges. Information is dispersed throughout thousands of pages. To access the exact information you are looking for, you are bound to carry out an accurate search. Under these circumstances the main challenge is that of recall and precision (Ali Mohammadi 2002).

In collecting, organizing and distributing information, libraries and information centers are confronted with the difficult task of selecting and organizing resources from the web. The way to do so is the real challenge. A variety of standards, manuals and guidelines have been produced in this regard (Neshat 2003).



Dealing with websites

Web materials are works which have been published in various formats by different individuals. They include: websites, weblogs, E-books, E- journals articles and so on. Among these, websites are considered to be the most numerous. A website is a collection of webpages within an internet domain providing multimedia services, such as text, voice, static and moving images. A webpage is a document written in HTML format that can be reached and accessed using HTTP protocol. The main part of a website is its homepage. The website of an institution, whether or not of a commercial nature, is its face to the world and the starting point for most users' visits (Nielsen 2002).

In order to evaluate the usability of a website the following issues should be considered: contents, language, structure, design, navigation and accessibility. The evaluation can be carried out according to two methods:

1. Evaluation with user participation
2. Evaluation without user participation

The first method will be especially useful for assessing whether the language and structure of the website is easy to understand for users (Poll 2007).

Standards and metadata projects for web materials organization

Various standards and metadata schemes have been developed for describing internet materials, among which the following should be mentioned:

1. Dublin Core (DC)
2. Machine Readable Cataloging (MARC21)
3. Resource Description Framework (RDF)

4. Encoded Archival Description (EAD)
5. Global Information Locator Service (GILS)
6. Text Encoding Initiative (TEI)

Cataloging electronic resources at the National Library and Archives of the I.R. of Iran (NLAI)

The following standards are currently in use at NLAI for cataloging books and no-book material:

1. Anglo American Cataloging Rules, Second Edition (AACR2)
2. International standard Bibliographic Description (ISBD)
3. Universal MARC

The use of MARC dates back to 2006. IRAN MARC is a customization of UNIMARC. Based on this standard, specific codes and worksheets were defined for describing electronic resources, which is carried out according to Draft guidelines for cataloging electronic resources (2003). According to the kind of access, electronic resources are divided into two groups: Direct Access and Remote Access resources (Abdoullahi 2002). Websites fall within electronic resources with a remote access. As far as direct access electronic resources are concerned, over 3,600 items have been catalogued at NLAI to date. It seems that, by paying attention to the above mentioned issues, standards and description rules for electronic resources are adequate for cataloging websites.

Definition of the problem

Websites are information resources playing a role in knowledge and information cycle. Cataloguing and organizing information resources is the basic, technical and central function or core element in regard to this. It is therefore necessary for NLAI to pay attention to these websites, furthermore because one of its main

responsibilities (as well as many others), is to supervise, control and compile cataloging standards for other libraries and information centres.

Since NLAI has entered the field of processing and cataloging books and non-book material consisting of electronic resources, it is quite obvious that it should have a clear programme and a plan for cataloging, updating and managing the websites. This research aims at exploring the feasibility of cataloguing websites as well as the most significant electronic resources both at a national and an international level by NLAI.

The research background

The research background in Iran is as follows:

1. (Haji Zeinolabedini 2002) has dealt with problems regarding the organization and information retrieval in the internet. He produced a manual on cataloguing internet resources by using criteria based on the Anglo-American cataloguing rules, some rules specifically designed for internet and electronic resources and those used for Persian material.
2. (Fattahi and Hasanzade 2006) have carried out an evaluation study on the information organizing styles in the academic libraries websites.

The research background out of Iran is as follows:

1. (Koch et al. 1997) have studied the role of classification schemes in describing and retrieving internet resources. They have recommended the use of these schemes to organize the contents of websites. They do not address issues related to the application of different styles of organization, nor to the point of view of librarians and users.
2. (Williamson 1997) with emphasis on the knowledge structure exist in the internet resources, in relation with the

knowledge organizing and management and information retrieval, has emphasized mentioned on the importance of the organization.

3. (Ward 2001) has produced a list of the activities which are carried out in the US libraries with respect to internet resources organization.
4. (Willer et al. 2008) have made an assessment of processing and organizing web resources, based on the costs supported by the Library and National University of Croatia. The conclusions of the research show that the processing time of printed and web material is the same.
5. (Younghee 2011) has investigated the time lapse between the creation of a web resource and the improvement of the original metadata by a third party. The research findings show that user satisfaction is related to usability, information elements, effectiveness and efficiency.

The importance of this research

The following issues have been addressed:

1. To establish a database of websites and enrich the National Bibliography of Iran;
2. To search websites by using the (Rasa) library software¹;
3. To establish access points or links for the end users based on descriptive and analytical aspects;
4. To improve recall and precision in websites bibliographic records;
5. To define standards and integration of websites cataloging in regard to descriptive and analytical aspects.

¹ Rasa is the special library software that has been used in NLAI, since 10 years ago.

The research scope

The main object of the present study is to carry out websites cataloging adopting the same standards as at NLAI. For this purpose the study is subdivided as follows:

1. Techniques for gathering websites information;
2. Bibliographic description of the websites on the basis of the same standards and rules as at NLAI;
3. Recall and precision accessibility improvement by establishing links and carrying out topical analysis;
4. Websites indexing based on subject systems in use at NLAI.

The main questions

1. How do we obtain information on/from the websites?
2. What is the situation regarding websites bibliographic descriptions based upon the use of NLAI standards and rules?
3. What is the situation regarding recall and precision accessibility to the websites links and subject analysis?
4. How are NLAI subject systems used for indexing websites?

The sample selection

The sample analyzed in the present study consists of 50 websites. They belong to 20 subject areas which have been selected at random from the Pars Index websites².

² <http://www.parsindex.com>.

Methodology of the research

The present research has been carried out through a descriptive survey and a library study. To collect the necessary information we have used check lists and descriptive statistics for data analysis.

The research findings and answers to the main questions

12.1 First question

How do we obtain information on/from the websites

In this research, for accessing the websites information, two approaches have been studied:

1. Using the websites list

Some databases and websites show a list based on subject classification. Thus one of the approaches for accessing the websites information is to use the websites directory. Catalogues of this kind that could be included in the search sample were: Iran Website³, Alexa⁴ and Parsindex.⁵ In the present research we chose to use the Pars Index. We could then access many websites and carry out our study.

2. Entering data regarding websites in the NLAI Websites.

Since internet resources are information resources, they should be treated by NLAI as part of its mission. The

³. <http://www.iran.ir/directory>.

⁴. <http://www.alexa.com>.

⁵. <http://www.parsindex>.

NLAI Website can be a portal to access websites information. So by designing an “electronic worksheet for data entry of websites information” and locating it on the NLAI Website, we could obtain the websites addresses and their information.

Table 1 shows the recommended fields to design the “electronic worksheet for websites information data entry”.

Table 1: The recommended fields to design the “electronic worksheet for websites information data entry”

Field name	Persian title	Parallel title	Owner	Computer designer	Production year	End edition time	Language	Subject area	Keywords	URL	Description
Field type	Required	Optional	Required	Optional	Required	Required	Required	Required	Required	Required	Optional

12.2. Second question: What is the situation regarding websites bibliographic descriptions based upon the use of NLAI standards and rules?

Table 2 shows the frequency of Anglo American Cataloging Rules and UNIMARC standard elements in the websites descriptive cataloguing.

Table 2: The frequency of Anglo American Cataloging Rules and UNIMARC standard elements in the websites descriptive cataloguing

Area	Descriptive element	AACR2	UNIMARC (field)	UNIMARC (block)	Frequency percentage
Title and statement of responsibility	Title proper	9.1B	200\$a	Descriptive Information (2)	76%
	GMD [Electronic resources]	9.1C	200\$b		
	Parallel title	9.1D	200\$d		
	Other title information	9.1E	200\$e		
	Statement of responsibility	9.1F	200\$f		
	Edition	9.2B	205\$a		68%
Type and extent of resource area: not used					
Publication and production	Place of production	9.4C	210\$a	Descriptive Information (2)	70.6%
	Publisher and Concessioner	9.4D	210\$c		
	Date of production	9.4F	210\$d		
Physical description area: not used					
Note	Nature and scope	9.7B1	300	Notes (3)	51.4%
	Language	9.7B2	300		
	Source of title proper	9.7B3	304		
	Statements of responsibility	9.7B6	304		
	Edition and history	9.7B7	305		
	Publication, distribution, etc	9.7B9	306		
	Physical description	9.7B10	307		
	Related title	9.7B4	312		
	Pertaining to intellectual responsibility	9.7B6	314		
	Content	9.7B18	327		
	Abstract	9.7B17	330		
	Audience	9.7B14	333		
	Type of electronic resource	9.7B8	336		
	System requirements	9.7B8	337		
Total frequency percentage					60%

As shown in table 2, the most frequent application of standards and rules which have been studied for websites descriptive cataloging are in the title and author fields with 76 percent and the least frequent are related to the note field with 51,4 percent. So in relation with the second question, we can say that the possibility of websites descriptive cataloging, on the basis of the standards and rules which are being used at the NLAI, is approximately 60 percent.

12.3. Third question: What is the situation regarding recall and precision accessibility to the websites links and subject analysis?

The second part of AACR2 is related to subject analysis and link points. Table 3 shows the frequency percentage of relevant UNIMARC fields.

Table 3: The frequency of UNIMARC standard application in the websites links and subject analysis

Field name	Field number	Block number	Frequency percentage
Parallel Title Proper	510	Related Title (5)	61.5%
Other Variant Titles	517		
Expanded Title	532		
Additional Title Supplied by Cataloguer	540		
Personal Name Used as Subject	600	Subject Analysis (6)	82%
Corporate Body Name Used as Subject	601		
Title Used as Subject	605		
Topical Name Used as Subject	606		
Geographical Name Used as Subject	607		
Personal Name - Secondary Intellectual Responsibility	702	Intellectual Responsibility (7)	53.3%
Corporate Body Name - Primary Intellectual Responsibility	710		
Corporate Body Name - Secondary Intellectual Responsibility	712		
Electronic Location and Access	856	International Use (8)	100%
Total frequency percentage			70.4%

By observing table 3, we notice that the most frequent use of UNIMARC standard is related to block 8, with 100%. Block 6 comes next with 82% and then block 5 with 61,5%. The least used is Block 7 for which a frequency of 53,3% was recorded. So in response to the third question, we can state that the possibility of recall and precision access of websites with subject analysis and using the retrieval links established at NLAI is approximately 70 per cent.

12.4. Third question: What is the situation regarding recall and precision accessibility to the websites links and subject analysis?

At NLAI the non-book resources are indexed with the use of controlled language.

Table 4 shows the subject headings systems. It should be mentioned that other subject heading systems such as LCSH, thesauri, subject dictionaries, as well as encyclopedias, public databanks, special databanks for subject authorizing, are being used in addition to the subject systems listed below.

Table 4: The frequency of subject systems used in websites indexing

Subject system	subject area	Frequency percentage
Persian Cultural Thesaurus (ASFA)	Humanity sciences	66%
Persian Medicine Thesaurus	Medical sciences	100%
Science Thesauruses	Engineering sciences	100%
Persian Subject Headings	All sciences	72%
Total frequency percentage		84.5%

By observing table 4, we notice that every subject system has been studied. So in response to the fourth question, we come to the conclusion that the use of subject systems used for websites indexing at NLAI is possible in more than 84 per cent of cases.

Discussion and conclusion

By comparing the present research with other ones it can be mentioned that:

1. Websites organization is very significant, for user's satisfaction (Willer et al. 2008; Ward 2001; Younghee 2011).
2. The term "websites organization" by libraries or librarians, have been mentioned by Willer and Ward researches (2008; 2001).
3. Fattahi and Kock (2006; 1997) have emphasized on the websites classification and cataloging, for accessibility of the websites.
4. In some researches and studies (Haji Zeinolabedini 2002; Williamson 1997; Koch et al. 1997), use of resources cataloging rules and standards, are emphasized and confirmed.

The findings of this research examines that the organization of websites is possible at the NLAI;

- In this regard, we can design the "websites registration electronic worksheet" for organizing the websites;
- By accomplishment of the above step, the information of the websites can be seen by the end user. Thus we have, accessibility, usability and satisfaction of the users;

- Thus the websites information, can be seen at NLAI website;
- With the use of AACR2 in the UNIMARC metadata domain and customizing of the rules according to our needs, and by using the "websites registration electronic worksheet", the analysis and description of websites will be possible;
- Thus, the websites accessibility, with different access points, will be possible;

So that the websites indexing and subject analysis will be achievable.

Recommendation on the basis of the research

1. To design and create a portal for websites data entry (collecting and cataloging) in the NLAI Website;
2. To carry out specialist training in the websites cataloging field;
3. To program for websites information dissemination in a recall and precision situation.

References

- Abdollahi, Maryam. 2002. "Evaluating of Electronic Resources Cataloging Situation on the Basis of AACR2 in Tehran Academic Libraries and Archives." MA Thesis, Islamic Azad University, North Tehran Branch.
- Ali Mohammadi, Dariush. 2002. "Meta Database in Wide World Web." *Faslname-Ketab*.
- Fattahi, Rahmatollah, and Mohammad Hasanzade. 2006. "A Survey of the Experts Libraiians about the Information Organizing Methods in Academic Libraries Websites." *Faslname-Ketab*.
- Haji Zeinolabedini, Mohsen. 2002. "A Survey on the Internet Resources Cataloging Problems and to Present a Manual for Iranian Libraries." MA Thesis, Medical Science University of Iran. School of Medical Management and Information.
- Koch, Traugott, Anna Brümmer, Debra Hiom, Marianne Peereboom, Alan Poulter, and Emma Worsfold. 1997. "The Role of Classification Schemes in Internet Resource Description and Discovery."
<http://www.ukoln.ac.uk/metadata/desire/classification/classification.pdf>.
- Neshat, Narges. 2003. "The Challenges of Subject Organizing of Web Resources." *Ettlaa-Shenasi*.
- Nielsen, Jakob. 2002. "Top 10 Guidelines for Homepage Usability."
<http://www.nngroup.com/articles/top-ten-guidelines-for-homepage-usability/>.
- Poll, Roswitha. 2007. "Evaluating the Library Website: Statistics and Quality Measures." In *Libraries for the Future: Progress, Development and Partnerships*. Den Haag: IFLA.
<http://archive.ifla.org/IV/ifla73/papers/074-Poll-en.pdf>.
- Ward, Diane. 2001. "Internet Resource Cataloging: The SUNY Buffalo Libraries' Response." *OCLC Systems & Services*.

- Willer, Mirna, Tanja Buzina, Karolina Holub, Jasenka Zajec, Miroslav Milinovic, and Nebojsa Topolscak. 2008. "Selective Archiving of Web Resources: A Study of Processing Costs." *Program: Electronic Library and Information Systems*.
- Williamson, Nancy. 1997. "Knowledge Structures and the Internet." In , Knowledge organization for information retrieval: proceedings of the sixth international study conference on classification research:23–27. University College London.
- Younghee, Noh. 2011. "A Study on Metadata Elements for Web-Based Reference Resources System Developed through Usability Testing." *Library Hi Tech*.

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ABSTRACT: The focus of this research is the feasibility of websites cataloging with the use of the NLAI standard rules. For this purpose 50 websites in 20 subjects were selected at random from Parsindex Websites. The study was carried out following two different methodologies: a preliminary checklist was compiled in order to gather the necessary data and information and then descriptive statistics were used for data analysis. The findings show that the use of NLAI standards to organize and to catalog websites is both practicable and convenient.

KEYWORDS: Websites, electronic resources, cataloging, National Library & Archives of I.R. of Iran (NLAI)

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