Content analysis of open access manuscripts in National Library & Archives of Islamic Republic of Iran(NLAI)

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Abstract:

This research pays attention to content analysis of open access manuscripts in NLAI. Investigation of the subjects shows that the highest percentage of subjects belongs to "Religion"(39.22%).The data implies that Persian Language (82.56%) is the highest in monolingual manuscripts. The results show that the oldest manuscript belongs to the Eleventh Century A.D and "Western Paper" (72.59%) has the highest consumption rate. Also, the data shows that "NASTA'ALIGH Script" (64.31%) the highest used scripts in manuscripts and valuable manuscripts constitute 42.16% of the study population. The results obtained betoken very interesting truths on these manuscripts.

Keywords: open access, manuscripts, National Library & Archives of Islamic Republic of Iran, Content analysis.

1. Introduction

Iran is home to one of the world's oldest continuous majored civilizations, with historical and urban settlements dating back to 7000 BC. Since the use of paper gained popularity within the scope of Islamic civilization, Iranian scientists have been the greatest creators of written sources in Iranian and Islamic civilization, and owned the first-grade works in all scientific and literary fields.

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One of the main sources of heritage of Islamic Iranian civilization is the manuscripts and handwrittens. Naturally, anything belonging to the past grows in material value and takes on museum nature according to its antiquity. This is a rule, which certainly apply to manuscripts. Awareness of the presence of manuscripts in libraries around the world and access to them are among the issues paving the way for researchers to restore, correct and publish manuscripts. Libraries protect manuscripts and make them available to researchers through publishing catalogs, presenting bibliographic and manuscriptology specifications and preparation of images and microfilms.

With technology being progressed and internet phenomenon being developed, a great transition has occurred in all fields of human knowledge, especially in manuscriptology researches. The main transition in this field is provision of catalogs of manuscripts as well as introduction of their images on the internet. The transition that has occurred in the minds of manuscript protectors is that apart from museum value, they attach scientific and research importance to them, and try to pave the way for researchers' easier access to manuscripts.(Khalifeh, Bahman,2008).Manuscripts are used by researchers, scholars sciences as a rich and creditable resources.

Open access movement has had many achievements science its birth. Today, not only open resources have significantly increased, but also search tools guaranteeing access to such resources have grown. Open access is a worldwide phenomenon. Open Access aims to create a "perfect world" where knowledge is free and easily accessible. It is a world where knowledge is always building upon itself. Open access manuscripts, that is, complete digital reproductions of the manuscripts are linked with corresponding scholarly descriptions. Open access manuscripts have many advantages, such as, the introduction of valuable and unknown works, easy and quick access to original manuscripts or handwriting of authors, inform the researchers to comparison and correction of manuscripts.

2. Originality/Value

Bibliography is an instrument for conducting research, the most important function of which is to facilitate the users' access and awareness of the sources of other libraries. From

international viewpoint, bibliography is the most important and basic step for realizing one of main programs of IFLA, that is, Universal Availability of Publication (UAP) and Universal Bibliographic Control and International Marc (UBCIM). For researchers and university professors, national bibliography is so vital and conspicuous that puts the required bibliographic information at users' disposal presenting any country's literacy warrant, and in this respect, it can be said that economization on time and cost is its least usefulness and efficiency.

NLAI's policy on selecting items for national bibliography is as follows:

- All national publications regardless of their language or format
- Iranian publications outside Iran regardless of their language or format
- Manuscripts existing inside the country regardless of language
- Audio-visual materials published in Iran
- Iranian electronic publications (books, periodicals ,etc.)

Most of the national libraries, including National Library and Archives of the Islamic Republic of Iran (NLAI), are obliged to collect, organize and protect manuscripts as one of their national bibliographical items according to their objectives and policies. In order to make manuscripts available, NLAI has proceeded to develop "HARAM Project[4]" (Digital National Memory) in 2008.This project is designed to protect digitally manuscripts in a long time duration, to present proper services to users, promote accessibility these recorded heritage and open access to knowledge. The aim of this project is to serve not only researchers, but also interested members to them. At the moment, this project contains open access manuscripts, dissertations, pictures and periodicals in full text, which are accessible via website of NLAI. This digital library will continuously be updated and extended. This research pays special attention to content analysis of open access manuscripts in NLAI. The approach of this research , analysis of subject, language , the date of copying, the place of copying, the type of paper and script, the determination of number of valuable manuscript.

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[4] http://dl.nlai.ir/UI/Forms/Index.aspx

What caused the researchers to analyze the above-mentioned items is as below:

- **Significance of subject**

Rich records of Iranian and Islamic civilization motivated the researchers to realize that what subjects did authors and writers emphasize more when the reproduction facilities of written materials were limited.

- **Significance of language**

Considering the wideness of Iranian territory and sphere of Islam and Arabic language's influence therein caused the researchers to realize that apart from Persian Language, what else writers wrote in.

- **Significance of copying Date:**

The antiquity of a manuscript was investigated since it is one of the items causing double value for a manuscript.

- **Significance of copying place**

Although most of the manuscripts, being investigated so far, lack copying places, and such an investigation is perhaps better off being omitted from the research questions, this item (that is, copying place) has been investigated thanks to the importance of copying place that expresses part of historical identity of it.

- **Significance of paper type:**

Identification of paper in manuscriptology of handwritten books is construed as part of historical adventure of them and copying date and manuscriptology in the geographical region where such a piece of work was transcripted. Eastern catalogers, especially the Iranians, made every endeavor to determine type of paper in manuscriptology. Although, at first glance, paper is merely a material used to write on, papers form part of identities of manuscript and thus investigation and identification of types of papers being used in manuscripts is construed as part of history and civilization of any tribe or nation among whom such manuscripts were compiled.

Determination of type of paper in manuscripts is construed as:

- The geographical region where such a paper was produced or prevailed,

- The approach of the copyist of such a manuscript on the choice of paper type

- The durability of that book and importance of its subject

- Determination of the role and position of the copyists and paper vendors in the period when such a manuscript was transcripted

- Determination of the progress rate of paper making industry in the geographical region, where the manuscript was transcripted and its period

- Determination of part of the history of transcription and book craft in the geographical region

Therefore, paper is not only a physical material for manuscript but also can be content and research-related. This is why the Iranian and Islamic catalogers tried to investigate and determine paper type as part of manuscriptology. The analysis of paper type was therefore, propounded as one of the main questions in the research.

- Significance of script type

One of the main points of manuscriptology that has been considered by bibliographers since ancient times is the script type of handwrittens and manuscripts. For such significance, script type has been meticulously considered by the contemporary catalogers and has been the top line of manuscriptologic subjects.

Since the Fourteenth century Anno Domini(the first half of the Eighth Century Lunar Hegira), *NASTA'LIGH* Script (the combination of *TA'LIGH* and *NASKH* Scripts) gradually emerged owing to the tendency of transcriptors towards stenography and thanks to the higher speed in writing books and correspondences. *NASTA'LIGH* Script was not limited to Persian writings and used in Arabic books as well. Undoubtedly, *NASKH* was the most prevalent script in transcription, which was gradually considered since the tenth century Anno Domini (the Fourth Century Lunar Hegira). The script was highly admitted for its easiness. Therefore, it took priority over other scripts. Thanks to its importance, the researchers considered script type in their research **(**Components of manuscript cataloging …).

- Significance of valuable manuscripts

It is obvious that any manuscript is valuable due to its antiquity and uniqueness. Yet, some manuscripts are of higher value thanks to the following reasons:

1. Being the handwritens of authors: The manuscripts written by authors themselves

2. Old manuscripts: The manuscripts, created before printing invention, are of higher value

3. Artistic manuscripts: The manuscripts intended for the importance of a subject, used artistic techniques to raise their value and beauty (Vafadar Moradi, Mohammad, 2000). For example:

Gilding: Geometrically regular and symmetric shapes drawn with only gilt and black ink

Dyeing illumination: Geometrically regular and symmetric shapes being drawn with azure, cinnabar, verdigris, gilt, black etc.

TASHEIR (Historated border-painting): According to Manuscript-crafters, it is defined as some shapes of flowers, leafs and images of animals being decorated with gilt only

TALA-ANDAZI-BEINOLSOTOR (Interlinear gilding): Sometimes, manuscript-crafter covers all the spaces between lines with golden background and sometimes they surround the brims of golden background with black lines.

Arabesque (*ISLAMI*): it is defined as shapes and knot-work with numerous turns and twists, like a plant with twisted stems, buds, leafs, flowers and interwoven branches. It is also known as *ISLAMI*, *SALMI*, *KHATAEI, and SLIMI KHATAEI.*

SHAMSEH (Circular Medallion): A round and gold-plated shape being usually drawn on the first page of a manuscript and its title together with the name of author being inserted in its center.

SARLOH (Frontispiece): A geometric shape similar to veranda and altar drawn with gilt and other colors. It is called a cartouche if a geometric shape like a rectangular is drawn beneath Frontispiece.

TORANJ (Medallion): Oval-shaped lines whose center is decorated with *ARABESQUE*, plant, animal and/or *NASKH, NASTA'LIGH and RIGHA.*

SARTORANJ (Finial): a rhombic and crenate shape being drawn in upper and lower sections of Medallion and attached to it (Mayel Heravi,Najib,2001).

The research has tried to determine the number of these manuscripts.

The investigations made by the researchers suggest that there has been no research similar to this one. The previous researches were made through content analysis on other sources:

Brody, Tim (2004)"Citation Analysis in the Open Access World"; Liu, Zao; Wan, Gang (2007) "Scholarly Journal Articles on Open Access in LIS Literature: A Content Analysis" .

3. Research questions

The researchers are going to answer to following questions:

1. What is the subject approach of open access manuscripts in NLAI?
2. What is the language of open access manuscripts in NLAI?
3. Which century do the open access manuscript of NLAI belong to?
4. What is the place of copying of open access manuscripts in NLAI?
5. What kinds of paper are used in open access manuscripts in NLAI?
6. What type of script do these open access manuscripts have?
7. How many of the open access manuscripts in NLAI are precious?

4. Methodology

The research method is content analysis. The research population includes 3873 manuscript records existing in the *HARAM* Website, of which twenty records were omitted due to their lack of corresponding scholarly description, and the population was calculated to be 3853. In order to collect data, checklists were used, which include components of subject, date of copying, place of copying, language, type of paper, type of script and value of script.

-Subject

Since old metadata lacked subjects, the following items were considered to extract subjects of manuscripts.

1. To investigate the introduction of manuscript in metadata
2. To look for manuscript print format in database of National Bibliography of Iran
3. And to consider some pages of digital manuscript version

Dewey Decimal Classification was used so as to group subjects, and the subjects were classified in ten main classes.

- Language

Considering the fact that some manuscripts are monolingual, some bilingual and some trilingual, in present study, the checklist of language was divided into three groups of monolingual, bilingual and trilingual, and the languages used in each group were determined.

- Date of copying

Considering the manuscripts metadata in which some dates are in year and some in century, century was calculated and considered as the criterion for date of copying.

- Place of copying

Considering the fact that the present territory of Iran does not match territory of Iran at the time of manuscript being transripted, place of copying has been determined according to the territory of Iran at the time of the manuscript being transripted.

- Type of paper

Paper type was determined according to manuscripts metadata, and the items, in which type of paper was not determined, were marked with "without mentioning type of paper" due to the fact that determination of paper type is not possible through digital version of those manuscripts.

-Type of Script

The criterion for determination of script type is according to metadata of manuscripts. For the items, in which type of script was not mentioned, script type was determined by consideration of their digital versions.

Manuscript value

The following criteria were considered for determination of value of manuscripts:

1. Manuscripts being written by authors themselves.

2. Old manuscripts: The manuscripts created before invention of printing

3. The manuscripts that are of value from artistic viewpoint: for instance, they have gilding, dyeing illumination, historated border-painting, miniature, medallion, circular medallion, interlinear gilding etc.

5. Results

5.1. Subject approach of open access manuscripts

The data in Table 1 shows that the highest percentage of subjects belongs to class 200 (Religion) with 39.22%, class 800 (Literature) with 25.51% and class 900 (History, geography and biography) with 14.53% respectively. The lowest percentage of subject belongs to class 300 (Social Sciences) with 1.01%.

Table.1. Subject approach of open access manuscripts

DDC	Subject	Number	Percentage
000	Computer science, information & general works	50	1.30
100	Philosophy and psychology	123	3.19
200	Religion	1511	39.22
300	Social sciences	39	1.01
400	Language	158	4.10
500	Science (including mathematics)	203	5.27
600	Technology	187	4.85
700	Arts and recreation	39	1.01
800	Literature	983	25.51
900	History, geography, and biography	560	14.53
total	-	3853	100

5.2. Language of open access manuscripts

Table 2 implies the language frequency in manuscripts. The data in the table implies that Persian Language with 82.56% and French Language with 0.05% are respectively highest and lowest in monolingual manuscripts. In the bilingual group, the highest rank belongs to Persian and Arabic with 1.17%.

Table 2. Language of open access manuscripts

		language	Number	Percentage
monolingual		Persian	3181	82.56
		Arabic	606	15.73
		Turkish	9	0.23
		France	2	0.05
Bilingual		Persian – Arabic	45	1.17
		Persian – Turkish	1	0.03
		Persian- French	5	0.13
		Persian- Hindi	1	0.03
		Persian- Sanskrit	1	0.03
Trilingual		Persian- France-English	1	0.03
		Persian- Turkish- Arabic	1	0.03
total		-	3853	100

5.3. Date of copying of open access manuscripts

The data in Table 3 implies that the oldest manuscript belongs to the Eleventh Century AD (Fifth Century Lunar Hegira).The most manuscripts belong to Nineteenth Century AD (Thirteenth Century Lunar Hegira) with 22.71%. The date of copying is not mentioned in 47.86% of the intended population.

Table 3. Date of open access manuscripts

century A.D.	Century Lunar Hegira	number	percentage
11	5	1	0.03
12	6	10	0.26
13	7	20	0.52
14	8	11	0.29
15	9	45	1.17
16	10	198	5.14
17	11	299	7.76
18	12	220	5.71
19	13	875	22.71
20	14	330	8.56
without date	-	1844	47.86
total	-	3853	100

5.4 .Place of copying open access manuscripts

Table 4 implies the place of copying of the manuscripts. Investigation and evaluation of the place of copying of the manuscripts presented in the research suggests that only 96 manuscripts of the study population have data appertaining to the place of copying, of which only 70.83% belongs to the territory of Ancient Persia (Iran). 17.7% of the manuscripts with places of copying being mentioned belong to the Indian Subcontinent.

Table 4. Place of open access manuscripts

place	number	Percentage
Iran	68	70.83
Indian subcontinent	17	17.71
Arabic countries	6	6.25
Afghanistan	4	4.17
France	1	1.04
total	96	100

5.5. Types of paper used in open access manuscripts

Table 5 shows that "Western Paper" with over 72.59% and "Kashmiri Paper "with 0.03% have the highest and lowest consumption rate respectively. 1.38 percent of the study population lacks the information appertaining to the type of paper.

Table 5. Kinds of paper used in open access manuscripts

Kinds of paper	number	percentage
Western paper	2797	72.59
Esfahani paper	596	15.47
Dowlatabadi paper	204	5.29
Bukharai paper	84	2.18
Indian paper	67	1.74
Samarkandi paper	24	0.62
Commen paper	21	0.55
Khanbalgh paper	4	0.10
Chinese paper	2	0.05
Kashmiri paper	1	0.03
without mentioning type of paper	53	1.38
total	3853	100

5.6. Types of script written of open access manuscripts

The Data in Table 6 shows that " *NASTA'LIGH* Script" with 64.31% and "Latin Script" with 0.05% are respectively the highest and lowest used scripts in manuscripts. Two types of scripts have been jointly used in some manuscripts. As for combined script manuscripts, "*NASKH* and *NASTA'LIGH* " with 9.97% secure the highest position.

. Table 6. Kinds of script written of open access manuscripts

Scripts	Numbers	Percentage
NASTA'LIGH	2478	64.31
NASKH	983	25.51
NASKH & *NASTA'LIGH*	384	9.97
NASTA'LIGH & *Latin*	3	0.08
NASKH & Latin	3	0.08
Latin	2	0.05
total	3853	100

5.7. Precious   manuscripts   of open access manuscripts

Table 7 implies that valuable manuscripts constitute 42.16% of the study population, of which authors' written manuscripts are 0.47%, old manuscripts 2.26% and artistic manuscripts 39.43%.

Table 7. Precious   manuscripts   of open access manuscripts

	Type of value	Number	Percentage	total
Precious manuscripts	Handwritten of author	18	0.47	42.15
	old	87	2.26	
	Artistic	1519	39.42	
Common manuscripts	-	2229	57.85	57.85
total	-	3853	100	100

Table 8 implies that the manuscripts being written by their relevant authors belong to the period between the Seventeenth and Nineteenth Centuries AD (The Eleventh and Fourteenth Centuries Lunar Hegira). The Nineteenth Century AD (the Thirteenth Century Lunar Hegira) with ten works and the Eighteenth Century (the Eleventh Century Lunar Hegira) with one work respectively secure the highest and lowest rates of the manuscripts being written by their relevant authors.

Table 8. Open access handwritten authors manuscripts according to century

century A.D.	Century Lunar Hegira	number	percentage
17	11	4	22.22
18	12	1	5.56
19	13	10	55.56
20	14	3	16.67
total		18	100

5. Discussion and Conclusions

Investigation of the subjects of manuscripts of Open Access in the HARAM Site of NLAI suggests that the rank of" religion" is the highest compared to other ranks. This implies that religion has had an exalted place among the Iranian since a long time ago. Iran (Persia) is a land with an ancient history and rich literature; and allocation of some 40% of the subjects of manuscripts to" literature", "History, geography and biography" is defensible. The upbringing of poets and sages such as Firdausi, Hafiz, Sa'di, Mowlavi is the evidence for this claim.

With the languages of the manuscripts being investigated, it was determined that Persian Language has constituted 83% of Open Access manuscripts. This complies with the fact that Persian is the official language in Iran. After Persian Language, the most manuscripts are in Arabic, which is the language of the Iranian's official religion. This results from the influence of Islam in Iran. Meanwhile, Arabic Language was the scientific language at that time and most of the scientists wrote their works in Arabic. It goes without saying that there are some manuscripts in Turkish due to the fact that part of Iranian speak Turkish. As for European and Western Languages, there are some manuscripts in French. This is because French was taught as second language in schools and universities. Among bilingual manuscripts, the Persian-Arabic manuscripts constitute a high share of Open Access. This is justifiable considering what was mentioned earlier.

Investigation of date of copying of manuscripts suggests that the oldest manuscript dates back to Eleventh Century Anno Domini (the Fifth Century Lunar Hegira). The existence of a manuscript with over 10-century antiquity is not only cause of pride, but also implies history of science and writing in Iran. The upswing of the number of manuscripts up to Nineteenth century Anno Domini (the Thirteen Century Lunar Hegira) suggests the growth and boom of science, culture and literature in this territory. And the downswing of it in Twentieth century Anno Domini (the Fourteen Century Lunar Hegira) is possibly due to the progress of printing industry and reproduction and lack of necessity for transcription.

Although many manuscripts lack copying place, few manuscripts with such a trait suggest the broadness of Iranian Emperor at that time, which bordered on Jeihoun River from the Northeast, Caspian Sea from the North, Caucasian Mountains and Asia Minor from the Northwest, Fertile Area of Mesopotamia from the West, India and Indus River from the East and Persian Gulf from the South.

The existence of manuscripts whose places of writing are Indian Subcontinent, Afghanistan, is defensible thanks to the proximity of these countries to the territory of Iran. Existence of some manuscripts belonging to Arabic countries is justifiable due to the fact that the religious language of the Iranian is Arabic and that the Iranian and the people of these countries have the religion in common.

Investigation of paper type in manuscripts implies that western paper has been the most popular paper in this arena. The popularity of this paper arises from its mechanical production, which in turn results in its lower prices and frequency. It is obvious that western paper was less used in precious manuscripts. Next is *ESFAHANI* Paper, which was produced in Esfahan during Safavid and Qajar Dynasties and was welcomed due to its availability to Iranian scientists, writers and authors. Its popularity is undoubtedly defensible for Esfahan being a city in Iran. Kashmiri Paper was the least used paper in manuscripts due to its destination from Iran (Azimi, Habibollah,2008).

The results of the study suggest that the most popular script in the manuscripts is NASTA'ALIGH, which was welcomed and used since the Fourteenth century Anno Domini (the first half of the Eighth Century Lunar Hegira), thanks to inclination of transcriptors towards stenography and more rapidity in writings and correspondences. Undoubtedly, *NASKH* was the most prevalent script, which was gradually considered since the tenth century Anno Domini (the Fourth Century Lunar Hegira). The script gained much popularity due to its easiness. The existence of few manuscripts in western languages justifies the rarity of manuscripts in Latin Script.

The study dealt with precious manuscripts from three aspects: the first aspect is the writing of manuscripts by the authors themselves. Existence of manuscripts being written by their relevant authors reveals the valuable collection of manuscripts in (NLAI), part of which is now available in the form of open access, this collection is now expanding. The

other aspect is the preciousness of the ancient manuscripts in the library. Of course, it should be noted that most of the manuscripts, which were available in different cities of Iran until the eleventh century Anno Domini (the fifth century Lunar Hegira), were destroyed owing to political events. During the Mongol era, some irreparable losses were caused to Iranian and Islamic manuscripts. During Safavid Dynasty, numerous manuscripts were brought from different places to Iranian libraries, which were then transferred to other places such as Iraq, Russia and Turkey. Scholars and scientists took their personal libraries with them during their journeys and this partly led to displacement and transfer of ancient manuscripts. In late nineteenth century and early twentieth century Anno Domini, numerous manuscripts were transferred from the countries of subcontinent of India, Turkey and Iran to European and American libraries and museums through trade, military and political means and/or by antique sellers, traders and dealers. The third aspect is the preciousness of manuscripts from the viewpoints of the use of artistic techniques like dyeing illumination, historated border-painting etc. Usually, Koran, holy book of the Iranian and literary books such as Golestan, Bustan, Masnavi-Ma'navi and Divan of Hafiz have been decorated with artistic images due to their importance. Firdausi, the Great, said: Art belongs with no one but the Iranian

At the end, it is noteworthy that whereas this study is unique in this field and there have been no similar researches, it is not possible to make a comparison between the results of the study with that of prior researches.

In brief, it can be stated that considering the significance of manuscripts as one of the most important items in National Bibliography of Iran and the subject of Open Access, part of these manuscripts are now found in *HARAM* Site of *NLAI*; and present study was conducted to introduce these manuscripts and depict their characteristics. The results obtained betoken very interesting truths on these manuscripts.

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