University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

4-19-2019

World Digital Library: An Analysis of Collection

Nahida Nasreen
University of Kashmir, India, ifrafayaz1414@gmail.com

Bisma Bashir
University of Kashmir, India, bismabashir53@gmail.com

Fayaz Ahmad Loan
University of Kashmir, India, fayazlib@yahoo.co.in

4-19-2019

World Digital Library: An Analysis of Collection

Nahida Nasreen

Bisma Bashir

Fayaz Ahmad Loan

World Digital Library: An Analysis of Collection

Nahida Nasreen

Ph.D. Scholar

Centre of Central Asian Studies

University of Kashmir, Srinagar

E-mail: ifrafayaz1414@gmail.com

Bisma Bashir

Ph.D. Scholar

Centre of Central Asian Studies

University of Kashmir, Srinagar

E-mail: bismabashir53@gmail.com

Dr. Fayaz Ahmad Loan

Centre of Central Asian Studies

University of Kashmir, Srinagar

E-mail: fayazlib@yahoo.co.in (Corresponding author)

Abstract

Introduction: The World Digital Library, one of the hallmark digital preservation initiatives with a global perspective was launched by the UNESCO and the U.S. Library of Congress in collaboration with 32 partner institutions on April 21, 2009. The World Digital Library archives and provides access to unique cultural materials from libraries, archives, museums, educational institutions, and international organizations from 193 countries around the world. It aims at promoting international and intercultural understanding, expand the volume and variety of cultural content on the Internet, provide resources for educators, scholars, and general audiences, and to narrow the information divide within and among countries by capacity building in partner institutions.

Objectives: The World Digital Library provides unprecedented, free of charge access to significant primary historic materials including; manuscripts, maps, rare books, films, sound recordings, prints and photographs. The aim of the present study is to analyze such resources on the basis of the regional attributes, lingual patterns, time periods, subject coverage and institutional contribution.

Methodology: The World Digital Library website is being explored to retrieve the information to examine its collection on various facets.

Results: The maximum number of resources in the World Digital Library is available on Europe (7276), dealing with History and Geography (16,135), contributed by the Library of Congress (8537) and available in the Arabic language (2830).

Implications: The study can act as an indicator highlighting the importance of the WDL as a promising platform for preservation, access and descent of global cultural and heritage resources.

Key Words: World Digital Library, WDL, Digital Library, Digital Preservation, Digital Collection
Paper Type: Research Paper

Introduction

Owing to the advent of ICT, the present generation, mostly researchers increasingly expect everything to be available on the web immediately and preferably free of cost. Libraries, museums and archives work together in this direction, to make their resources available on the web for a large audience, through a single access point, with universal accessibility **(Verheul, 2010)**. One of the most important global digital library initiatives with this aim is the World Digital Library (WDL) Project.

The World Digital Library, one of the hallmark digital preservation initiatives with a global perspective was launched by the UNESCO and the U.S. Library of Congress in collaboration with 32 partner institutions on April 21, 2009. The World Digital Library archives and provides access to unique cultural materials from libraries, archives, museums, educational institutions, and international organizations from 193 countries around the world. The WDL aims at expanding the volume and variety of cultural content on the Internet to promote international and intercultural awareness. The WDL provides resources for educators, scholars and general audiences to narrow the information divide within and among countries by capacity building in partner institutions **(Murillo, 2010)**. The WDL hosts primary cultural content in a wide number of formats contributed by a large number of partner institutions from different countries around the globe. According to **Van Oudenaren (2017),** search interface in the WDL is available in seven languages: Spanish, English, Chinese, Portuguese, Russian, French and Arabic. He also reported that since its public launch, over 10 million visitors have visited the WDL accounting for some 135 million page views. In WDL items are browsable by place, time, topic, type of item and contributing institution, or can be located by an open-ended search, in several languages **(Abid, 2009)**. The WDL also hosts some special features including interactive geographic maps, a timeline, advanced image-viewing and Item-level descriptions of all featured items providing additional information about them thus making the site more and more informative and user-friendly.

Origin & Development

The United States Librarian of Congress James H. Billington proposed the establishment of the World Digital Library to UNESCO in June 2005 with the idea of creating an Internet-based, easily accessible collection of world's cultural assets that would highlight the achievements of all countries and cultures, thus promoting cross-cultural awareness and understanding. UNESCO welcomed the idea and in December 2006 along with the Library of Congress, co-sponsored experts meeting with key stakeholders from all regions of the world. This meeting of experts from all over the world led to the establishment of working groups to develop guidelines for the project, and to a decision by Library of Congress, UNESCO and five prime partner institutions - the Bibliotheca Alexandrina, the National Library of Brazil, the National Library and Archives of Egypt, the National Library of Russia and the Russian State Library - to develop and contribute content to the WDL. In April 2009, the WDL was publicly launched, with content about every UNESCO member country **(Zhang, 2011).** Presently, the WDL has 159 partner institutions including libraries, archives, museums, and other institutions like ministries of culture, etc. from 193 countries around the world. The WDL is supported by the UNESCO and IFLA, and received financial support from a number of private institutions and foundations, including Google, The Qatar Foundation, The Carnegie Corporation of New York, Microsoft, Inc., and so on **(Zhang, 2011).**

The principal objectives of WDL are to:

- Promote international and intercultural understanding;
- Expand the volume and variety of cultural content on the Internet;
- Provide resources for educators, scholars, and general audiences;
- Build capacity in partner institutions to narrow the digital divide within and between countries.

The global community from across the world should join hands to make possible free flow of information via the World Digital Library.

Contents & Collection

The World Digital Library (WDL) makes available on the Internet, free of charge and in multilingual format, significant primary materials from countries and cultures around the world. These cultural treasures include Books, Journals, Manuscripts, Maps, Musical scores, Motion pictures, Sound recordings, Prints, Photographs, and Architectural drawings. Each item in the collection possesses a full and thorough description, links to the similar items within the collection, and links to some

external resources as well. Most of these items are downloadable in the different formats including tiffs for the images, pdf for manuscripts and books, mpeg and mp3 for video and audio respectively. The collection includes many unique and ancient artifacts and the oldest items like "an 8000 years old painting of bleeding antelopes" dating back to BCE 1. Some items in the collections also include curators' videos, in which curators explain the importance of certain items and discuss these materials in a scholarly fashion **(Murillo, 2010)**.

"Bleeding antelopes" from the eastern Free State of South Africa.

Special Features

According to **Abid (2009)**, WDL provides many user-friendly features, which include:

- Multilingualism: The metadata and related content are translated into seven languages: Arabic, Chinese, English, French, Portuguese, Russian, and Spanish. This feature brings the WDL closer to the goal of being truly universal **(Nabi, 2012)** because, if a site aims at addressing a global audience, multilingualism and language translation is vital.

- Consistent and high-quality metadata: Each item in the WDL collection is described by a set of consistent bibliographic information (or metadata) relating to its geographical, temporal and topical coverage. Each item contains thirteen metadata tags; creator, date created, language, title in the original language, place, time, topic, type of item, physical description, collection, institution, and an external resource. This makes the site easy and interesting to explore and helps in interlinking similar items.

- Description and scholarly interpretation: Among the most impressive features of the WDL are descriptions of each item written by curators and other experts, designed in such a way that students and the general public can learn more

about the cultural heritage of all countries. Some items in the collections also include curators' videos, in which curators explain the importance of those items in a scholarly fashion.

- Collaborative network: The WDL greatly emphasizes on partnership, collaborative ventures and user participation. Similarly, technical and programmatic networks are very vital to WDL's sustainability and growth because they provide the means for the development of low-cost solutions and sources of support for implementation.

- Exposure to search engines: Individual items are indexed in different search engines so that these can be harvested the search engines for the maximum utilization of information. Further, multiple methods are available to browse, search, discover and download high-quality contents free of cost.

Research Design

Objectives of the study

The World Digital Library provides unprecedented, free of charge access to significant primary historic materials including; manuscripts, maps, rare books, films, sound recordings, prints and photographs. The aim of the present study is to analyze such resources on the basis of:

- Regional Collection
- Lingual Patterns
- Time Periods
- Subject Coverage and
- Institutional Contribution

Methodology

The World Digital Library website was explored to retrieve the information to examine its collection on various facets. The data was collected from the website of WDL from 1st-20th February 2019.

Data analysis

Regional Contribution

Table 1 clearly depicts that maximum (35%) number of items in the collection account for Europe, followed by the Middle East and North Africa (18%), Central and South Asia (17%), North America (10%) and Latin America & Caribbean (9%).

However, a very meagre proportion of items i.e. 6 (.03%) items account for Antarctica. The data shows that the total regional coverage of items (20705) slightly exceeds the actual number of items/resources (19147) hosted by the WDL. This variation would have caused due to the fact that some items/resources are relevant to more than one region.

Table 1: Region-wise number of Items

S. No	Region	Number of Items	Percentage
1	Europe	7276	35%
2	Middle East and North Africa	3629	18%
3	Central and South Asia	3457	17%
4	North America	2093	10%
5	Latin America and the Caribbean	1933	9%
6	East Asia	1360	7%
7	Africa	507	2.5%
8	World	199	.9%
9	South Asia	167	.8%
10	Oceania and the Pacific	78	.37%
11	Antarctica	6	.03%
	Total	**20705**	**100%**

Country-wise Contribution

Out of the total 19147 items (belonging to 193 countries) hosted by the WDL, the maximum number of items in the collection belongs to the Russian Federation (4246), followed by the USA (1890), Iraq (1705), Afghanistan (1180) and China (920) respectively (Table 2).

Table 2: Country-wise number of Items

S. No	Country	Number of items
1	Russian Federation	4246
2	USA	1890
3	Iraq	1705
4	Afghanistan	1180
5	China	920
6	France	756
7	Saudi Arabia	728
8	Germany	545
9	Other Countries	7177
	Total	**19147**

Time series analysis

The WDL content is searchable by many time periods covering from 8000 BC -2000 CE and even afterward. Maximum resources (17491) belong to the time period of 1600-1999 CE followed by 1200-1599 CE and the minimum to the period before 1BCE and 1BCE - 399 CE with 5 items in each period (Table 3).

Table 3: Period-wise number of Items

S. No	Period	Number of items	Percentage
1	Before 1BCE	5	0.02%
2	1BCE - 399 CE	5	0.02%
3	400 CE – 799 CE	32	0.16%
4	800 CE – 1199 CE	198	1.10%
5	1200 CE – 1599 CE	1122	5.90%
6	1600 CE – 1999 CE	17491	91.3%
7	2000 CE and later	294	1.50%

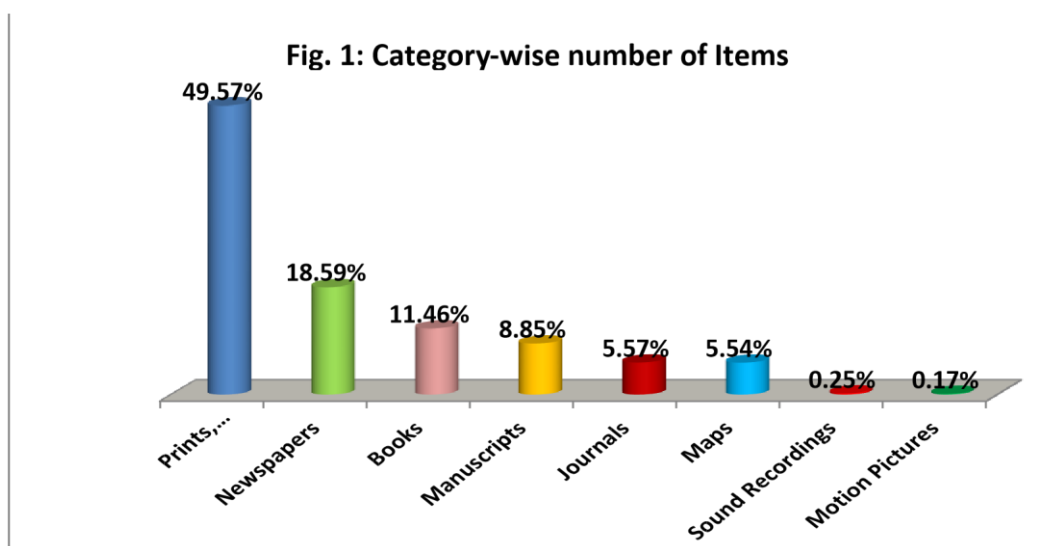|	Total	19147	100%

Subject collection

The ten broad subjects covered under the collection of the WDL are Computer Science, Information and general works, Philosophy and Psychology, Religion, Social Sciences, Language, Natural science and Mathematics, Technology (Applied Sciences), The Arts; fine and decorative arts, Literature and Rhetoric, History and Geography. The maximum number of resources belongs to History and Geography (16135) followed by Computer Science Information and general works (3560), Social Sciences (3163), The Arts; fine and decorative arts (3124) and minimum number is in Philosophy and Psychology (140) as shown in table 4. There is a huge subject overlap between the resources which accounts for a large variation in the actual number of resources hosted by the WDL and a total number of resources showed during subject coverage analysis.

Table 4: Subject- wise number of Items

S. No	Subject	No of items
1	History & Geography	16135
2	Computer science, Information & general works	3560
3	Social sciences	3163
4	The Arts; Fine and Decorative Arts	3124
5	Technology (Applied Sc.)	1437
6	Religion	1274
7	Literature and Rhetoric	807
8	Natural Sciences and Mathematics	564
9	Language	168
10	Philosophy & psychology	140
	Total	**30372**

Content Types

The WDL presently hosts eight types of content resources. Prints and photographs account for 49. 57%, followed by the newspapers (18.59%), books (11.46%), manuscripts (8.85%), Journals (5.57) and maps (5.54%). Sound recordings and Motion pictures form a meagre portion in the collection accounting for less than 1% of the whole content (Fig. 1).

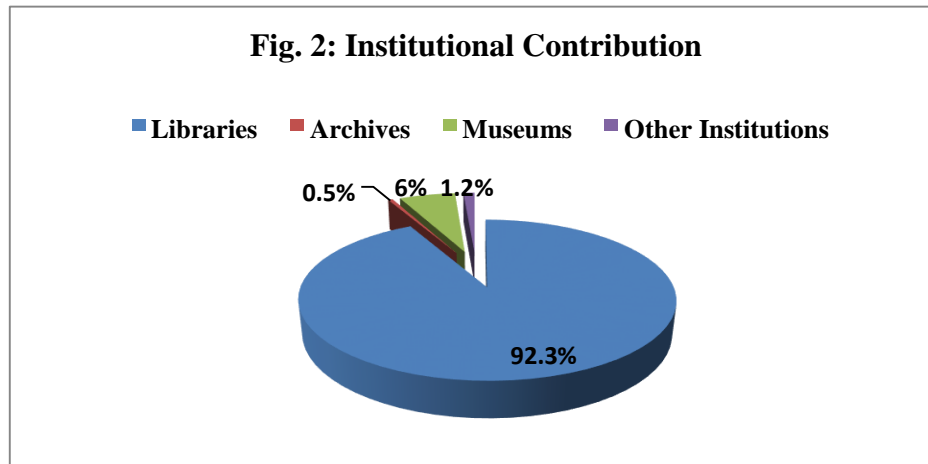Fig. 1: Category-wise number of Items

Language Diversity

The WDL presently covers resources in more than 145 languages. The maximum number of resources are present in Arabic (2830) followed by English (2786), Spanish (1494), Russian (1244), Persian (964), French (784), Pashto (749), and Chinese (642) and so on (Table 5).

Table 5: Language-wise number of Items

S. No	Language	No of items
1	Arabic	2830
2	English	2786
3	Spanish	1494
4	Russian	1244
5	Persian	964
6	French	784
7	Pashto	749
8	Chinese	642
9	Others	7654
	Total	**19147**

Institutional Contribution

The study reveals that presently 159 institutions including 119 Libraries (92.3%), 19 Museums (6%), 5 Archives (0.5%) and 16 other institutions (1.2%) are contributing towards resources development in WDL. Among top contributing institutions is the Library of Congress with the maximum of 8537 (44.6%) resources, followed by Iraqi National Library & Archives (1509), National Library of Argentina (966), museums like Siberian Museum Agency (247) and Archives like US National Archive (48) (Fig. 2).

Fig. 2: Institutional Contribution

■ **Libraries** ■ **Archives** ■ **Museums** ■ **Other Institutions**

0.5% 6% 1.2%

92.3%

Findings

1. From the analysis of resultant data, it is clear that the maximum proportion of resources in the World Digital Library collection account for Europe (35%) followed by the Middle East and North Africa (18%) and the least proportion of items (.03%) account for Antarctica.

2. Out of the total 19147 items hosted by the WDL, the maximum number of items in the collection belongs to the Russian Federation (4246).

3. The WDL content is searchable by many time periods covering from 8000 BC -2000 CE and even afterward. Maximum resources (17491) belong to the time period of 1600-1999 CE and minimum (5) to the period before 1BCE and 1BCE - 399 CE.

4. The WDL content is arranged in 10 subject categories according to Dewey Decimal Classification **(**https://www.wdl.org/en/about/**)** including Computer Science Information and general works, Philosophy and

   Psychology, Religion, Social Sciences, Language, Natural science and Mathematics, Technology (Applied Sciences), The Arts; fine and decorative arts, Literature and Rhetoric, History and Geography with maximum number of resources belonging to History and Geography (16135).

5. The WDL presently hosts eight types of content resources including prints and photographs, newspapers, books, manuscripts, journals, maps, sound recordings and motion pictures. Prints and photographs account for 49. 57% while sound recordings and motion pictures account for less than 1% of the whole content.

6. The WDL presently covers resources in more than 145 languages. The maximum number of resources are present in Arabic (2830) followed by English (2786). The WDL also provides search interface in 7 languages which include Spanish, English, Chinese, Portuguese, Russian, French and Arabic, which is in tune with the findings of **Van Oudenaren (2017).** This feature is vital for a site with global audiences and to expand scholarly research in nonEnglish and non-Western content**.** Furthermore, providing the content in multiple languages promotes a sense of international and intercultural understanding and develops a sense of global cultural unity.

7. The study reveals that presently 159 institutions including 119 Libraries, 19 Museums, 5 Archives and 16 other institutions are contributing towards resources development in WDL. Libraries contribute the maximum share (92.3%) of the collection. Among top contributing institutions is Library of Congress with maximum of 8537 (44.6%) resources followed by Iraqi National Library & Archives, National Library of Argentina, museums like Siberian Museum Agency and Archives like US National Archive.

Conclusion

The World Digital Library (WDL) beyond doubt is a cultural treasure, the 'Memory of the world', a cooperative international project with an aim of 'digitization to preserve culture'. The WDL is an excellent example of unique content, excellent design, and consistent metadata brought together on a single platform to create a truly invaluable and forward thinking project keeping in harmony with some of the core values of library profession like to strive to provide access to learning materials, opportunities for lifelong learning, and intellectual freedom **(Murillo, 2010).** As proposed by Billington, the WDL digitizes and makes freely available over the Internet primary historical documents that tell the stories and highlight the achievements of all countries around the world. With its collection of 19147 items contributed by 159 partner institutions from 193 countries, the WDL provides a place for inter-cultural learning, cross-cultural communication and develops a sense of global cultural unity. The multilingual capabilities of the website cater to the needs of users from

different ethnic and cultural backgrounds and with different languages. Furthermore, providing the content in multiple languages also promote a sense of international and intercultural understanding. The WDL truly holds to its aim of preserving the contents that contribute to the global heritage and bringing people closer together precisely by celebrating the depth and uniqueness of different cultures on a single global platform, thus acting as a promising platform for preservation, access and descent of global cultural and heritage resources.

References

Abid, A. (2009). The World Digital Library and Universal Access to Knowledge. Retrieved from:
        http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/programme_doc_wdl.pdf

Murillo, A. P. (2010). World Digital Library: Bringing together best practices and superb content. *B Sides*, 9. Retrieved from:
        https://ir.uiowa.edu/cgi/viewcontent.cgi?article=1007&context=bsides

Nabi, Somaira. (2012). World Digital Library: A Case Study. *TRIM, 8* (1), 23-31. Retrieved from:
        https://www.researchgate.net/publication/313880919_World_Digital_Library_A_Case_Study

Van Oudenaren, J. (2017). The World Digital Library. *Bibliothek Forschung und Praxis*, *41*(2), 242-249. Retrieved from:
        https://www.degruyter.com/view/j/bfup.2017.41.issue-2/bfp-2017-0016/bfp20170016.xml

Verheul, I. (March 01, 2010). The Digital Library Futures Conference and the future of digital libraries within IFLA. *IFLA Journal, 36*(1), 74-81.

World Digital Library (2019). *About World Digital Library*. Retrieved from:
        https://www.wdl.org/en/about/

Zhang, B. A. (2011). *The World Digital Library*. 374-376. Retrieved from:
        https://www.researchgate.net/publication/220705609_The_World_Digital_Library