

National Bibliography in Brazil and Sri Lanka in Electronic Age: a comparative study

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Abstract: It treats about current and general national bibliography in Brazil and Sri Lanka. It compares both national bibliography due to IFLA guidelines to answer: how the Brazil and Sri Lanka National Bibliographies are organized? This qualitative research is based on the International and Comparative Librarianship approach. From IFLA Guidelines, we identified six dimensions to compare similarities and differences between the National Bibliographies. Brazilian National Bibliography is provided through the current National Library's OPAC and Sri Lanka produces monthly its own national publishing. Since the obligation of legal deposit and the task of bibliographic record, both National Bibliographies provide social benefits such as national safeguard.

Keywords: Brazil National Bibliography. Sri Lanka National Bibliography. National Bibliography in Digital Age. IFLA ICNBS Guidelines. Comparative Librarianship.

1. Introduction

This text reports a comparative study between Brazil and Sri Lanka National Bibliographies. Since the bibliography theory was developed in the 50s by Margaret Egan and Jesse Shera, it is known that all types of bibliographies are products of social contexts that have created them and engines of social interaction in several knowledge communities (Weldon 2013). The bibliographic work is a social creation and a single bibliography has a collective purpose (Weldon 2013). As Bell (1998, pg. 29) explains: "a current national bibliography is a mirror that reflects the culture of a country. By looking at the current national bibliography one is able to learn about the uniqueness of a country". The conception of current and general National Bibliography is modern and it embraces national bibliographic control goals. Under the Guidelines for National Bibliographies in the Electronic Age developed by the International Federation of Library Associations and Institutions (IFLA 2008), we aim to answer how the Brazil and Sri Lanka National Bibliographies are

organized? In this sense, we compare both National Bibliographies under IFLA guidelines. This qualitative research is based on the International and Comparative Librarianship approach. Journals, Library Catalogues and IFLA's database were material for literature review. Data were collected from the websites of the Brazil and Sri Lanka National Libraries. This article introduces first historical background of National Bibliography. Then, it analyzes IFLA guidelines and presents findings from comparisons and finally, the conclusion of this study.

2. Background

Modern National Bibliography is produced by a specific national bibliographic agency and its basic mission is to provide effects of national bibliographic control. Usually, National Libraries act as a bibliographic agency. Some formal resources are fundamental to a National Bibliography, such as: legal deposit, register centers of International Standard Numbering Systems (ISBN/ISSN) and integrated nationwide bibliographic services (IFLA 2008). Since mid-1950s national bibliographies worldwide were different each other. National Bibliographies may broaden the coverage to include publications by the country's citizens published abroad or publications about the country published abroad or in its own language (Bell, Langballe 2001). In addition, a nation may consider retrospective national bibliography or its national catalog as its general National Bibliography (Campello, Magalhães 1977, Roberts 1994). Several printed national bibliographies consist of more than one part – e.g. a monograph part, a serial part, an article part – and many are published in more than one format (Bell, Langballe 2001, pg. 2) After 1977, the IFLA/UNESCO Program Universal Bibliographic Control (UBC) involved operational standards recommendations for National Bibliography (Roberts 1994, Bell, Langballe 2001). Numerous bibliographies have been created since 1977, “some disappeared after a few years, while others have great difficulty in appearing regularly” (Beaudiquez 1998). In the Digital Age, some factors were added to “national published output”. Web publishing and e-media have changed the scope of national bibliographies worldwide (IFLA 2008). This qualitative study is based on International and Comparative Librarianship approach regarding the recognition that the traffic of ideas and expertise exchange should be two-way (Sartori 1999, Lor 2010). In Library Sciences, comparative studies can lead to improvements and two-way cooperation. Similar researches have already been done. Samarkandi (1990) compared the system of national bibliographic control of Egypt, Saudi Arabia and Tunisia to improve their bibliographic services. Bell and Langballe (2001) have reported their worldwide survey on IFLA guidelines for National Bibliography.

3. Historical Context of National Bibliography

As any kind of bibliography, National Bibliography is ancient in history of human knowledge (Malclès 1977). The prosperity of the book trade in the century XVII enlarged the popularization of the printed book (Diderot 2002).

The first literary, scientific and artistic societies, as well as the first serial publications of literature and science contributed to the diffusion of ideas and to the increase of the production and circulation of printed works (Burke 2003). Accompanying this expansion, bibliography works have evolved considerably, from enumerative lists to systematic arranges. The French Revolution changed the way to produce National Bibliography, it became comprehensive and value for civic and political purposes (Malclès 1977). In the context of Industrial Revolution, print machines produced cheaper and more numerous books than their hand-crafted predecessors (Feather 1982). In 1896, Frank Campbell formally defined the concept of national bibliography by his remark that it should be developed under a national bibliographic system in England (Harmon 1998). After the establishment of the International Institute of Bibliography, the elaboration of specialized and general bibliography arises under the notion of each country produces intellectually (Figueiredo, Cunha 1967). Over time, the primary sources for all types of bibliography are the national bibliographies (Madsen 2000) and most of them in activity today already had a long term of expertise. In 1927, The Committee for International Cooperation of the League of Nations (direct predecessor of UNESCO) and IFLA set up a Subcommittee for Bibliography and convened an annual conference of national library directors at its headquarters in Paris (Lor 2012). In this sense, Madsen (2012) reports earlier IFLA/UNESCO recommendations for the national bibliography. First through the international conference arranged by UNESCO in 1955, general and current national bibliography was defined basically as a system or as a national bibliographic service. This conception was a landmark of the 'new' national bibliography in a social sight. Basically, it means to avoid intellectual dispersion and cultural memory loss (Linder 1959). In the 1950s, several international programs emerged between UNESCO and IFLA such as: 'UNISIST', NATIS and PGI, all aimed to promote the planning of infrastructures in Documentation, Libraries, Archives, based on the development of national information systems (Lor 2012). The emergence of computing in the 1950s brought new possibilities for collecting and processing information (Wedgeworth 1993, pg. 2). At the same time, it made libraries and documentation systems high dependent on technology industry (Wedgeworth 1993, pg. 2). Most libraries had to wait a long term for automation. As Brookes (1974, pg. 234) declares: 'computer technology changes faster than our understanding of the objectives to which it could usefully be applied'. In the mid-1970s, IFLA/UNESCO idealized the UBC based on the promotion of a worldwide system for the control and exchange of bibliographic data (Roberts 1994). The purpose of the system was first ideological. UBC intended to make available the essential bibliographic data of all publications published in all countries. UBC was based on a network of national bibliographic agencies with the commitment of sharing bibliographic records derived from the national bibliography made it dependent of book trade (Madsen 2000). Under the ideal of shared bibliographic records and physical access to the collections of all libraries in all countries, it was believed that the program would be able to promote culture for international community. With the first years of UBC's

success, IFLA/UNESCO published in 1983 the *Manual of Bibliographic Control* (Roberts 1994). Later, to the idealism inherent in the conception of the UBC, it was added in its corollary some practical aspects about sharing of national bibliography to avoid duplication of efforts in the cataloging and the elaboration of bibliographic records. In both movements, the view that structures, systems, and networks should be formalized and self-benefiting from automated information processing would advance national and international policy objectives (Roberts 1994, Lor 2012). In 1987, the International MARC Program merged with the IFLA goals for UBC and the result of this was the constitution of the UBCIM Program. The objectives of UBCIM were: a) to encourage the exchange and use of globally compatible bibliographic records; b) create, maintain and promote the use of standards for the exchange of bibliographic data in the form of computer-readable records (Roberts 1994). Until 1998, IFLA/UNESCO concluded that they did not have the strength to impose standards, instead, IFLA assumed the role of persuading its members about the importance of implementing its recommendations. After 1998, through the International Conference on National Bibliographic Services (ICNBS), IFLA proposed to update guidelines for National Bibliography that could include the current national output, and where practicable also provide retrospective coverage (IFLA 2008, pg. 14) and to “include records for materials in all languages or scripts in which publications are produced” (IFLA 2008, pg. 14). Over time, the record of national knowledge was based on printed. The 1998 definition of national bibliography was broader than that of 1955. It was defined as a set of authoritative list and complete national production records. It should be published regularly with the least possible delay in accordance with international standards in order to attend a globally information needs (Madsen 2000). In Web time and open access movement, librarians worldwide can gain information about library and information service innovations. In this context, National Bibliographies expanded their social role by extracting records in bulk onto CD ROM and on the international level through web databases (IFLA 2008). The most recent IFLA guidelines aims to answer how national bibliographies should respond to the growing significance of electronic media and web publications.

4. IFLA 2008 guidelines for National Bibliographies

In the Electronic Age, the potential for the National Bibliography is expanded and newest digital information formats can also be included (Knutson 2001). In 2008, IFLA aimed to update National Bibliography guidelines in providing recommendations for publishing bibliographies in electronic form and on the inclusion of electronic resources. Given the wide range of available information systems, "national bibliographic agencies are facing even more pressure to sustain national bibliographies and to assure that they are relevant" (IFLA 2008, pg. 14). Traditionally, National Bibliography is useful for:

- 1) Libraries and librarians - for collections development, avoid double cataloguing task, verification of authorship and publication history.

- 2) Publishing industry and book trade - statistical account of a country's publishing output and Market acceptance measure.
- 3) Governmental interest - to provide evidence of the impact of government policies in relation to their programs and to exam the extension of a country's self-sufficiency in producing the publications it requires.
- 4) Social usage – it gives timely information about national publishing.

In any case, National Bibliography could satisfy information needs of any audiences such as many other information systems usually do. IFLA guidelines introduced at least six dimensions to increase National Bibliography social usefulness:

- 1) Interface and Functionality;
- 2) Information Retrieval;
- 3) Best procedures of Cataloguing;
- 4) New data record scope;
- 5) Exchanges of best practices and Cooperation;
- 6) Organizational model and Effectiveness Measure.

The 1st includes national bibliography functionality and its Interface. Through functional and interoperability, the main goal is to make easier information retrieval as OPACs and database usually do.

The 2nd refers to end-users search in electronic format of national bibliographic record. With a minimum of necessary access points, all users can easily identify, select, retrieval and access publications they need with the expectation of direct access to electronic resources or obtaining location of publications.

The 3rd relates to guidance for integrating cataloguing of electronic resources into national bibliographies, considering relationship of the national records to the national library catalogues, bibliographic records based on FRBR tasks, descriptive and subject standards schemes, related metadata with resources, data federation and persistent links.

The 4th refers to a set of electronic resources selection criteria and their specifics aspects to stimulate inclusion of materials such as: online newspapers, application programs/software and databases.

The 5th lies on learning from other and partnership-based. Some strategies are: seeking partners for cooperation within own country to create a nationwide environment based on a collaborative or distributed structure toward the common purpose of bibliographic control. The choice of a partner in a neighbour country similar helps to learn with successes and failures from other. The hiring or asking of technical assistance from a local, regional or international community may improve national bibliographic activities.

The 6th involves key issues to improve national bibliographic agencies. Considering each particularity, IFLA emphasizes its mission and includes organizational care:

- a) Business model - It depends on the clients and goals of the National Bibliography, the resources available to produce it, and the organizational or

political context of the national bibliographic agency. National records can be or not charged for the full bibliography, bibliographic services or representative records;

b) Presentation of the National Bibliography – It must be published without delay and its currency and effective distribution are quality criteria. The choice of media for delivery of the National Bibliography is influenced by the business model and resources available. It also reflects the level of automation in the country. Though ICNBS recommendations focus on print publications rather than other media, most national bibliographies changed from print to CD-ROM and then to online availability. Also, there are two ways for national records. Some countries differentiate their National Bibliographies from national catalogue. Other consider that everything added to their collections by legal does not require distribution of the caliber of a National Bibliography, so its national catalogue is enough.

c) Measuring the effectiveness - National Bibliography must be measured for many reasons: sometimes, funding for the national bibliographic agency is directly linked to governmental performance indicators. Narrow budgets and national policies may constitute barriers to the maintenance of national bibliographic services. Evaluation also contributes to improve information management and its processes. Statistics about National Bibliography effectiveness must provide timely and accurate answers to enquiries from: publishers, government, users. In addition, this allows identifying strengths and weaknesses to improve bibliographic services. All these guidelines involve technical and operational efforts to improve National Bibliography into its potential social usage.

5. Brazil and Sri Lanka National Bibliography

Both National Libraries act as the national agency for the National Bibliography Output. Although both nations have distinct history, they claim cultural heritage as central of their national bibliographic control models. Under IFLA guidelines, we find similarities and differences by comparing each one.

5.1 Brazil National Bibliography

Until 1990s, Brazil held distinct bibliographies under different titles and made by different organizations. After 1990s, the Current Brazilian National Bibliography became part of the current national catalog of books and serial publications; it is online and free of charges. Currently, Brazil has two distinct National Bibliographies: 'Current National Bibliography' and 'National Music Bibliography'. They are developed through legal deposit. Brazilian National Library is the unique depositary agency of all collectable materials by law and aims to advance the 'National Memory Collection'. Current legal deposit legislations are: Law 10.994/2004 requires the deposit of at least one work of a bibliographic nature (Book and Serials) in any format; Law 12,192/2010 covers the deposit of at least two copies of musical works (music scores, phonograms and other types of Brazilian recordings). Deposit laws state that current National

Bibliography only provides access to data records and its collection can be consulted *in locus*. Since 1978, the National Library is responsible for the supervision and national distribution of the ISBN. 'National Music Bibliography' was recently created by deposit law and its periodicity should be annual, but, so far, no list has been made available. There is no agency responsible for International Standard Music Number (ISMN) distribution. The ISSN registry is the responsibility of another government agency. Through ISSN distribution, the Brazilian Institute of Information in Science and Technology (IBICT) is responsible for the production and updating of the National Catalog of Serials (CCN) and for making it available on the Web. The national bibliographic agency does not collect statistical data about the usage of the National Bibliography. The bibliographic control of theses and dissertations is responsibility of each scientific and academic institution in the country. Through universities cooperation, IBICT provides a national online catalog for these materials titled 'Brazilian Digital Library of Theses and Dissertations', but there is no legal deposit law. Cataloging-In-Publication was regulated in 2003 by the National Book Policy: Law 10.753. Brazilian National Library has signed technical and technological cooperation agreements with national bibliographic agencies of Portuguese-speaking countries. They created the Lusophone Digital Library to provide online access to their cultural heritage.

5.2 Sri Lanka National Bibliography

From 1963 to 1973, the Sri Lanka National Bibliography was produced by the Department of National Archives. Since 1974, Sri Lankan National Bibliography is compiled and published by the National Library. In 1994, it has become a printed monthly publication. It is based on legal deposit from the Act No. 48 of 1973. Currently, there are five legal deposits agencies in the country: The National Archives of Sri Lanka, the National Library of Sri Lanka, the National Museum of Sri Lanka, the Main Library University of Peradeniya, the Library of University of Ruhuna. The law states five copies of each publication in the country should be deposited in the National Archives department. National Library receives one copy of these five copies. Bibliographic data from this deposit are used for the compilation of National Bibliography. According to the National Library and Documentation Services, the deposit law system allowed extensive coverage of bibliographical information on all subject areas, general and specialized. National Library and Documentation Services Board is the National Agency for ISBN, ISSN and ISMN systems and they are included in the entries under the bibliographic information; pre-publication information is included as a separate section titled "Catalogue of Forthcoming Publications". It covers data records of national publications, publications on Sri Lanka published in foreign countries and publications written by Sri Lankans and published in foreign countries. Records also include references of publications in Sinhala, Tamil and English. It includes information on printed publications, audio-visual materials, first issue of newspapers and serial publications, reprints with ISBN and ISMN numbers, unpublished postgraduate theses. Sri Lanka National Bibliography is produced in printed format under business model.

Also, the National Digital Library allows online access to National collections through its OPAC and it includes items of the National Bibliography. The main goal of National Digital Library is to develop national collection of digital material for the nation and to maintain a national library resources in digital media as a preservation strategy. National Library of Sri Lanka has conducted a survey on the usage of the National Bibliography recently, following are the major findings of the survey:

- a) Majority of the librarians studied are aware of the National Bibliography;
- b) Majority of the libraries studied obtain the National Bibliography for their libraries;
- c) Main reason for not obtaining the National Bibliography is lack of financial allocations;
- d) Main purpose of obtaining the National bibliography by libraries is to acquire information on new publications;
- e) Majority of the librarians studied have said that the content of the National Bibliography is satisfactory.

National bibliographic services are available on National Library website for librarians, for authors and publishers and for public, such as: Current Acquisition List, Cataloguing-In-Publication and Literary assistance projects.

6. Comparative Results

Six dimensions can be applied to compare similarities and differences between both national bibliographies, Brazil and Sri Lanka.

Brazil has not a separated National Bibliography, and all bibliographic data compiled from the items deposited by law are inserted into Brazilian National Current Catalog. On another hand, Sri Lanka has its own National Bibliography as a printed product. But, records from its National Bibliography also can be found on online National Catalogue. However, to achieve the objectives of national bibliographic control in the electronic age, both OPACs are fundamental for the diffusion and preservation of the intellectual memory of the countries. The organizational models of both countries could take advantage of strengths such as: the blending of business models and free of charge, i.e. the commercial distribution of a printed bibliography and the availability of data from legal deposit records in the online catalog. Also, both could avoid weaknesses, such as correcting the lack of possibility of downloading certain bibliographic materials.

IFLA Dimensions	Similarities	Differences
Interface and Functionality	International standards such as ISO-2709, ANSI Z39.2, MARC21 are applied to the online National Catalogues allow the transfer of bibliographic record from one system to another, without loss of information, making data independent of software and hardware. This guarantees bibliographic records interoperable between systems. All functionalities are compatible with the Z39.50 protocol.	Federated search and rapid response are quite different between both National Digital Catalogues. BNDigital is a separated catalogue and its interoperability increases its digital collection more than other Brazilian National Library Catalogues. Sri Lanka National Digital Library embraces federated search for all its catalogues: old gazette collection, national bibliography and manuscript collection and folklore collection.
Information Retrieval	In both National OPAC searches can be made through keywords combination found anywhere in the record or in specific record areas (titles, names, subjects, ISBN, Series etc.). Also, end-users can search by item type or by collection.	Although, bibliographic data become available online, information retrieval of bibliographic data from the Sri Lanka National Bibliography is possible through its current OPAC. In the Brazilian case, there is no specific index or database related to the list from the last deposits.
Best procedures of Cataloguing	Cataloguing is the first resource for the preservation and access to bibliographic items. They are based on descriptive and subject standards schemes. Metadata scheme with elements of the MARC format, Data Federation, and persistent links can be found. Bibliographic data records are leaderships for best practices for classification and cataloguing of books to libraries in the countries.	Sri Lanka National Bibliography has a pre-publication list included as a separate section titled "Catalogue of Forthcoming Publications". Sri Lanka National Library integrates the National Union Catalogue. Bibliographic data records can be re-used in local catalogues in libraries nationwide. Brazil Current Catalogue allows searches by index according to National Library collection: general, serials, rare books etc.
New data record scope	There are authoritative list catalogues. E-Book, first online newspapers issue and CD-ROM can be included. Both National Libraries develop national collections of digital material, born digital objects and digitized objects.	Sri Lanka deposit law is older than Brazilian law. But not only printed publications are inserted. It also includes audio-visual and electronic media. Brazilian deposit laws involve electronic and printed formats, limited to books and journals.
Exchanges of best practices and Cooperation	Both National Bibliographic Agency have co-operation among local libraries through various programmes. They have co-operation with other National Libraries and International Organizations, such as IFLA and UNESCO as well close relations with professional institutions in their countries.	The Brazilian cataloguing program is a reference within the country and for Latin America. Its collective catalog is about to work. Compilation of the National Union Catalogue is one of the major projects of the National Library and Documentation Centre in Sri Lanka.
Organizational model and Effectiveness Measure	National records can be found currently in both online Catalogues.	Brazilian model is free of charge and Sri Lanka is business model. Brazil National Bibliography has no data about its effectiveness measure but, Sri Lanka National Bibliography measures its effectiveness but, is not online available.

Chart - Similarities and differences between both national bibliographies.

Source: The Authors.

7. Conclusion

IFLA Guidelines for National Bibliography in Electronic Age involve technologic and operational issues to improve social usage of national bibliographies. The addition of electronic formats and Web-based extends social topics for its production and usage: effectiveness, friendly interfaces for search and information retrieval, wide levels of information need and cooperation, diffusion of national records, physical accessibility and evaluation by users. Most of these topics can be found in both Brazilian and Sri Lankan National Bibliographies models. By comparing both national bibliographic control, we

may assume that both national bibliographic agencies are updated to IFLA guidelines in the electronic age.

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