

Open Access Initiatives of the National Archives of Bangladesh (NAB)

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Abstract

The National Archives of Bangladesh (NAB) evolved to ensure official custody and physical safety of the archival resources mainly government records of the country. With regard to release their resources on an open access environment, NAB has initiated a digitization programme. Though the initiative is praiseworthy, the facilities are yet inadequate to make the project sustainable. The main focus of this paper is to overview different aspects of NAB's Open Access programme where it used secondary and primary data. The study identified the shortcomings and put forward some recommendations, with special preference to a proposed model of Archives Literacy, which eventually will ensure effective completion of the programme.

Keywords: *Digital Preservation, Digital Archives, Open Access, Digital Information, National Archives, Bangladesh*

1. Introduction

Archives as the records of cultural heritage and historical resources should always get huge care by their curators. Being the records of research and reference value to a nation and knowledge society the incubation of archival materials is quite different. In general archives refers to those materials as are produced in government initiatives during the development of a nation, by the eminent poets and national leaders, lawyers, artists, architects, engineers, academicians and so on. Therefore archival materials may include legal proceedings, the correspondence of a leader or of a famous author; family photograph albums of legendary persons of a territory; audio recordings of renowned magicians and prominently the original documents of historical events, maps and atlases etc. Since it is very prestigious for each nation to preserve all of

its past memory aids, every independent nation in the world has some intensive care units for long term preservation of their archives. However, sometimes due to over care of archival materials it becomes very difficult or sometimes impossible for average researchers to access those archival materials. In fact the curators had no alternative to this as most of the archival materials' remained in worsen condition whenever they are received along with the challenge of long term preservation. But the advent of the Internet and other digital reproduction and communication technologies have meant that people are now able to access information far more easily than ever before (Pappalardo et al., 2007). The development of the web environment, open access opportunity is gaining popularity both among information seekers and providers. Bangladesh is one of the fast growing economies in the South-East Asian region. For the last two decades it has experienced much advancement in the field of information and communication



technology. The National Archives of Bangladesh (NAB) was emerged as a national archives centre to ensure official custody and physical safety of the archives of all public offices of Bangladesh. NAB has taken an initiative to develop a web based archiving and management system for current and non-current administrative records, manuscripts, books, newspapers, maps, files etc. through its website. This paper presents a brief overview of digitization scenario of NAB with special emphasis on its digitization project. Besides, it also discussed some major constraints of NAB digitization project which should be considered for implementation of digitization activities in other similar organizations. Moreover, the suggestion ascertained herewith may be helpful for other archival institutions to plan and develop their digitization project.

2. Literature Review

Open Access (OA) is increasingly strong and significant issues in this digital era. The aim of OA is to make the scholarly publications freely available to anyone, anytime and anywhere through the WWW and Internet. The movement of OA is going to be a trend in the developing countries like Bangladesh, so it is important to increase open access to institutional outputs (research, heritage, educational, administrative and etc) through digital archive. To explore the details about OA resources, digital archive a huge number of studies have been undertaken by professionals, academicians and others.

Bijan Kumar Roy, Subal Chandra Biswas and Parthasarathi Mukhopadhyay (2016) through their study entitled "Status of Open Access Institutional Digital Repositories in Agricultural Sciences: A Case Study of Asia" describes the current state of open

access repositories (OARs) movement in Agricultural field of Asian countries, their characteristics in terms of types, contents, disciplines, languages covered, technical and operational issues, and policy matters. They find out cumulative growth of Asian agricultural repositories per year is very low in comparison to other developed countries or any other 'Multidisciplinary repositories'; number of objects uploaded is very low due to low submission compared to other 'Multidisciplinary repositories'. They found that most of the repositories have no policies and several key issues such as content and collections organization and management, metadata schema, preservation format, multi-linguality, workflow management etc. which required to be properly discussed. The authors suggested for a roadmap and national OA self archiving mandating policy based on global recommendations and best practices.

K. Jane Burpee and Leila Fernandez (2013) in their study "New frontiers in Open Access for Collection Development: Perspectives from Canadian Research Libraries" explained the global colleagues, opportunities for collection development in Canada include the support of OA journals, repositories, monographs and electronic theses. They recommended that the collection development librarians who are seeking to embrace OA in their roles should be encouraged to: collaborate, communicate and share OA materials; support small presses and publishers in a transition to OA; digitize heritage material and make it openly available; include OA materials in collections; and promote OA collections to users.

Lydia Chalabi and Madjid Dahmane (2011) in their study "Open access in developing countries:

African open archives” try to identify the developing countries open archives, by mapping out its characteristics, such as the volume of deposits of scientific researchers, their disciplinary belonging, fields and type. The study reveals that University appears clearly as the most active and more involved in open access projects and like the other developed countries, materials on English language and Science dominates the initiative. The results reveal another reality that 53.6% of open archives in developing countries do not open completely access to their content, in the same area the access is limited and reserved only for the institution users.

3. Why Open Access

Open access came into existence as a logical answer to inaccessible information as a sort of bridge to join the divide between haves and have nots predominantly due to the internet (UNESCO, 20150). Open Access Initiative (OAI) removes restrictions to free access to scholarly research, sharing knowledge and accelerating research. Harnad (2003) stated ‘the open-access archive as the most cost-effective and immediate route to providing maximal access to the results of publicly funded research, thereby maximizing the potential research impact of these publications’. Open access ensures free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself (Suber, 2004)(Bailey, 2006).

4. Objective of the Study

This study has been carried out with the aim to:

- 4.1 Assess existing state of resources and services of National Archives of Bangladesh (NAB).
- 4.2 Identify the main features of present digitization project of NAB, and
- 4.3 Determine the prospects and sustainability of digital preservation.

5. Methodology

The study is based on review of literatures such as books, journal articles, NAB’s official records, brochures, etc.; computation of secondary information and treatment of some primary data collected by personal interview with the personnel of National Archives of Bangladesh (NAB) and IBCS_PRIMAX Software (BD) Ltd. at different periods. Personal visits were also made to stacks’ areas to depict the real situation of the resources.

6. Brief History of NAB

NAB was founded in Dhaka at 1973 and governed under the Directorate of National Archives and Libraries of Bangladesh government. In 1983, the government of Bangladesh promulgated the National Archives Ordinance with a view to establish a national archive as well as creating certain regional archives centres. In 1985, the office of NAB and its collections were shifted to a newly completed building of the National Library complex located in Agargaon at Sher-e-Bangla Nagar in Dhaka. Later in July, 1995 Bangladesh Government approved a project which demanded a separate archives building in the premise of Directorate of Archives and Libraries. Under this project the foundation stone

of the archives building was laid in 2001 and construction was completed in June, 2004. NAB was shifted to its new building in 2005 (Mezbah-ul-Islam & Akter, 2008). As a national archival centre, NAB is a member of International Council on Archives (ICA) and South and West Asian Regional Branch of the International Council on Archives (SWARBICA).

7. Collections of NAB

NAB has a collection of more than 10,00,000 volumes of records till 2013. The bulk of these documents include proceedings and official records of the governments of Bengal and Assam of the British period which date back to the time of the East India Company and the governments of East Pakistan (1947-1971) and Bangladesh. These volumes contain letters, orders, resolutions etc. of the executive council headed by the provincial governor or lieutenant governor. The NAB also has a collection of some the government of Assam records (1875-1947) mostly the records of the districts of Sylhet and Cachar which were handed over to the government of East Bengal at the time of partition in 1947.

One of the earlier collections of the NAB was old historical records numbering about 20,000 files from the office of the Divisional Commissioner of Dhaka. Some of these records date back to the 1890s. These records have been classified and arranged as revenue records, judicial records, local self-government records, and so on. Around 3000 volumes of rare books on Bangladesh's administration and life during the 19th and 20th centuries were also collected from the Dhaka Divisional Commissioner's office. The NAB also has a collection of about 4839 volumes of records that belong to the 13 old districts of the British period, now parts of Bangladesh (Islam, 2006).

NAB has gathered a large number of records, books, files, maps, oil paintings etc. of the Zamindar families of Dhaka and Bhawal which are considered important sources of information on the Zamindari system and the history of East Bengal in the 19th and 20th centuries. A large number of old maps (1854-1967) have also been collected from various sources. Since 1973, NAB has been collecting the Bangladesh Gazettes and since 1987 the daily radio monitoring reports from Radio Bangladesh that provides an important source of contemporary national and international history. Other most valuable records which are preserved in the National Archives are: Cabinet Division Records (1971-1982), Government of Bengal Proceedings/File (1859-1964), Records of National Assembly of Bangladesh (1973-2001), Chittagong Divisional Commissioner's Records (1860-1960)

The National Archives has also collected various District Collectorate Records ranging from 1778-1990. Those are Dhaka City Corporation Records (1878-1966), Narayangonj Municipal Records, Zila Parishad records (Dhaka-1940-1990 & Rangpur - 1885-1990), Chittagong Port records (1907-1990), Sylhet Proceedings/Files (1874-1947). Moreover, NAB has also good collection of Purgunnah Maps (1849-1855), Government Publications (1836-2005), Gazettes (1832-2008), District Gazetteers (1905-1996), Estate Records (1820-1947), East Pakistan & Bangladesh Period Records (1962-1975), Bangladesh Taxation Appellate Division Records, Press Clippings (1962-1997), Microfilms of old records (1874-1916), Private Collection, Medical Records, Old Educational Institution Records, Newspapers (The holdings of 22 Bengali, 10 English and 09 foreign newspapers in the National Archives cover the period from 1947-2008) ("National Archives of Bangladesh," 2011).

8. NAB's Digitization Projects

In 2002, NAB initiated a five year (2002-2007) digitization project entitled "Digitization of District Records Collected from 1760-1900" (Shuva, 2009). The project's primary aim was to convert traditional district resources into digital format. The project also targeted to establish a strategy and methodology for permanent digital archiving of electronic versions of core resources of the centre. But the project failed to achieve its success due to gap in proper planning and other barriers. As a result when the project ended in 2007 only 150 District records on CD and more than 1000 records on DVD were found digitized though the expectation was much greater. Another project (2009-2012) called "collection and scientific preservation of obsolete records" was an initiative to introduce online access to the digital archives of NAB along with records' digitization activities. Through this project NAB had been equipped with different latest technologies and introduced Web based Archiving System and Dynamic Website.

The system encapsulated the following flow:

8.1 Input of Content

Digitization activities of NAB resources start from inputting raw data in the system cycle. The native documents are generally digitized with suitable media. Scanning interface is used to scan documents for uploading. Various audio and video files are uploaded in their native format. The content after upload is subject to tagging metadata input, validation of the tag and storage of the data in the content repository.

8.2 Assigning Metadata with the Content

Assigning and tagging appropriate metadata for the content is one of the most important functions of content development cycle. The success of retrieval performance mostly depends on assigning appropriate metadata. In Web Based Archiving System of NAB, generally the system creates a unique system identifier for each physical and digital document and stores the identifier as metadata with the record. Besides, there are some predefined and elaborate metadata contents. The person associated with tagging metadata generally select/associate metadata from the tagging framework to make tagging process unique and to ensure intelligent retrieval function.

8.3 Validating the Metadata

To ensure whether the assigned metadata is appropriate or not, a checker function is used in place using workflow functions of Web Based Archiving System.

8.4 Storing Content Repository

Content is stored in Oracle RDBMS as secure files. The encrypted data is now stored in place and is available for random reads and writes. De-duplication is used to enable Oracle Database to automatically detect duplicate LOB data and conserve space by only storing one copy.

8.5 Archiving of Old Content

National Archives of Bangladesh (NAB) possesses huge resources. It is assumed that not all resources are equally important. Moreover, there are some confidential records which are not opted for public access. Accordingly, all contents are not supposed to keep online. After proper categorization, non-

priority contents are supposed to achieve and store offline or near offline stores. Important resources are stored online or near online store.

8.6 Search and Retrieval Content

The system provides search facilities to meet the needs of users. There is also a help function to provide guideline on searching facilities. When a search is made the result displays a list of document and records meeting the search criteria. The query identifies the latest version of the record and all other versions are available to select and view. User can perform a range of search including complex search using any combination of metadata elements by using boolean operators to identify any specific elements. Since the search is based on metadata associated with the content full text search is possible for all content. Around 824500 records were stored in server and 539500 records were preserved on DVD. The search and retrieval is available through intuitive user interface.

9. Challenges of Open Access

It is evident from the South Asian perspective that the process of comprehensive online exposure of archival materials of this region is yet to walk a long way. Because inadequate funding and indifference of the government for the development of non profit organizations like archives and libraries are long lasting issues here. Moreover, due to political and socio-economic perspective some archival materials are kept secured from public access. However, the National Archives of Bangladesh started its journey in 2012 with a development project to extend its services to the doorsteps of its worldwide audience as well as ensure sustainability and quality of its resources. But the study reveals some drawbacks of NAB that hindered the success of the digitization project:

9.1 Lack of Integrity

In Bangladesh, NAB along with some museum and university libraries preserves records and objects of ancient times. Considering the endangered state and frequent user access to these objects their parent bodies have started digitizing them and make them available online. But there is no national standards regarding metadata, multilingual searching facilities, and software issues like OCR. The archival materials in Bangladesh comprise records of several languages together with indigenous literature. Therefore open access to these is quite impossible without development of functioning OCR.

9.2 Absence of International Collaboration

NAB failed to deploy any digitization project in collaboration with some of the international agencies as are working toward digital archiving and open access initiatives.

9.3 Inadequate Space and Equipment

Current digitization activities are being done in one computer lab with some limited resources whose facilities seem very inadequate.

9.4 Dependence on Non-professionals

The project is being going on under the guidance and personnel of the developer company. There is a gap between NAB personnel's knowledge regarding resources and the software systems. Hence, proper output may not be achieved.

9.5 Inappropriate Infrastructure Facilities

National Archives of Bangladesh is facing acute shortage of infrastructural facilities. Though there has a huge building with adequate space, the IT related facilities are very insufficient. Hence, the



present digitization project is greatly hampered due to necessary equipments and others.

9.6 Shortage of Qualified Staff

NAB faces shortage of staff to collect, preserve, maintain and administer the records of the government. Most of them do not have the required knowledge for proper maintenance of archives. Apparently, it is very difficult to concentrate on digitization and maintaining huge resources with the limited supporting staff.

9.7 Budget Deficiency

Digital preservation requires new and sophisticated technology and trained manpower which requires additional expenditure for the concerned institution. The annual budget of NAB and discrete project funding has hung up the initiatives of archive digitization and open access.

9.8 Lack of Policy Framework

One major factor regarding the inefficiency of NAB is lack of policy framework. NAB is still running based on the National Archives Ordinance passed in 1983 which is obsolete enough to conduct such organization of modern times.

9.9 Inadequate IT Skills

Most of the staffs of NAB lack of IT related skills required to creating and managing digitization of resources. In some case, even higher officials do not possess sufficient knowledge regarding present IT facilities and services to meet the user demand. Moreover, in most cases they are reluctant to cooperate with other institutions or individuals in fear of their status problems.

10. Suggestions

Digitization of NAB resources is very good and praiseworthy initiative. But for the sustainability and successful implementation concerned body should take following remedial measures:

10.1 Long-term Planning

Digitization of NAB resources is a huge and long term task. It has to go through several steps to make it a matured one. Some time it needs long time to get maximum benefits from using IT in library operation. Hence, long term-planning and well defined strategy is required. Besides, digitization activities should not be confined only as part of project. Rather it should be as a part of regular routine work.

10.2 Priority basis Digitization

As digitizing of NAB's huge collection as a gigantic task, priority basis digitization activities should be done. Grater valuable and import archives should digitized first than others.

10.3 Recruit Skilled Manpower

Top priority should be given to the development of human resources. Qualified personnel should be recruited as well as regular training program should be organized to refresh their knowledge and to be acquainted with the latest methods of archives management. Required and skilled manpower should be recruited for making the activities successful.

10.4 Backup System

There should be appropriate backup system of the digitized resources. These may be either on DVDs or any other external hard drives. The digitization team should always make alternative copies to ensure availability of resources to safeguard them from any damage cases.

10.5 Cooperation with other Organization

For sustainable growth and to ensure quality, NAB authorities should build up international cooperation with other developed or developing countries as well as international bodies in the form of sharing ideas and experience, training manpower and so on.

10.6 Development of Infrastructural Facilities

Required infrastructure should be ensured for the preservation as well as handing of the archives. There should be a modern laboratory equipped with latest technological facilities required for effective conservation of archives. An effective preservation section should be devised and equipped with expert personnel who will monitor environmental conditions in stack areas to ensure that they meet preservation specifications. There should be spacious rooms with standard set up for the use of archives. They should bear in mind that prevention is better than cure. Careful storage and usage can assure to avoid the need for conservation treatment.

10.7 Adequate Fund Support

As NAB is administered and maintained under the Bangladesh Government's guidance and allocation, government should allocate sufficient funds to implement and run full-fledged digitization environment of resources.

10.8 Human Resource Development

Human resources are the most important factors of the successful use of any technology in a library. Special and adequate training programmes should arrange for the NAB personnel in handling and exploiting new digitization technologies and their utilities. Special and relevant training is essential for IT administrative personnel. They should acquire

the skill of exploiting new technologies to the best of their advantage for increased productivity. Positive attitudes and actions of staff involved in IT use are regarded as crucial for the successful implementation of a new system.

10.9 Formulation of National Policy

As NAB is the custodian of government's record, it collects and preserves many important documents from various sources. Some of the resources may be very confidential relating to national interests. In that case, those resources may not be allowed to freely accessible to all. To select which documents may be freely available and which are not should be considered by a National Policy.

11. Conclusions

Open access national repository may help end-users to find their required information which may accelerate them to conduct more research on various national interests. Besides, an open access repository platform may help policy makers and analysts, academicians, training institutions, researchers and government and non-government organizations.

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