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President's Message

Towards a National Library Service

We boast about a rich library tradition that goes back to the 3rd century BC. At the same time we lament of the destruction of this tradition due to the Western occupation in the country while we talk about the formation of a modern library system during the British period. Mixed feelings..... More than 175 years have passed since the establishment of first libraries on modern lines by the British expatriates. Sixty years have gone since we gained independence. During this period a large number of libraries ranging from small public libraries to large university libraries have sprung all over the country.

We commenced the library education in early 60s with the establishment of SLLA, the professional body of librarianship in Sri Lanka. Now, two universities conduct courses on librarianship. Also we have the National Library and Documentation Board, the government body to assist and oversee the library development in the country.

Taken all these factors, library service in our country seems to be in a well off position. Is this true? The bitter truth is that we spend a considerable amount of national wealth on library services with little or no tangible results. Most of the libraries are in primitive conditions and manned by non-professionals. Due to political and other unhealthy influences qualified people do not find opportunities to be employed in libraries. Even those who are employed stagnate in the service with no opportunities for promotions.

On the other hand libraries exist as individual units. Among the libraries, which belong to one homogenous group no cooperation, exists. Public and school libraries are examples. Especially in the public library sector recruitment procedures, salaries and service conditions are different. An unnecessary division has been created within the profession. All these anomalous factors affect the service we are vouched to provide. Libraries are the knowledge base of a country. They are expected to provide access to information for the public. The ultimate goal of our service is to support the national development.

It is high time to evolve a national system of library service embracing all libraries in the country. Cooperation is the best solution, which needs to encompass every aspect of the service. Such cooperation among various types of libraries will give a new life to the service as well as to the profession. Then only the national income spent on libraries will become meaningful.

Professor Piyadasa Ranasinghe
President, Sri Lanka Library Association
June 2008

Preface

In keeping with the tradition, The Library Review No 22 has reached you today, at the 47th AGM. This year the Review has changed its format to enhance its worth as the annual publication of valuable information for librarians in Sri Lanka and worldwide. A short bio-data of the contributor is inserted at the beginning of the article to introduce the writer. Secondly, reminiscences of a senior librarian, which gives a wealth of information on practical experience, if not recorded, would have taken only the most common form of communication! Thirdly, a book review.

Contributions in this issue include views, research experiences and professional experiences of seniors as well as the younger librarians. An article each in Sinhala and Tamil; but most seem to prefer to write in English: unmistakably an easy way to reach the world.

I hope you will find this issue interesting, informative and a learning tool.

A warm acknowledgment is extended to all the sponsors who assisted us with advertisements in this issue and to Sadeepa Print House for their good service in printing this issue within a short time frame.

I am deeply indebted to Ms Deepali Talagala, Mr N U Yapa and Ms. Kamalambikai Kanthappu, for assistance given in the evaluation of the articles, Mr Jagath Weerasekera for his expert advise on formatting the journal for printing, Sugath Gunatilleke and Saman Devagamage for obtaining sponsorship and to Priyadarshani Hemakumara for offering her expertise in this field and to the SLLA staff for their kind support extended to publish this issue. They were all in the background, silently supporting the publication work without which, I would not have completed this work on time.

Ms G M de Silva
Convener, Publications Committee
Sri Lanka Library Association
June 2008

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Computerization of Union Catalogues: with special reference to Sri Lanka

N. U. Yapa

Consultant Librarian

N.U. Yapa

Mr N U Yapa holds B.Sc (Cey.), MLS (Canada-UWO), ASLLA and Hon. Fellow of SLLA. He is known as the father of IT in LIS in Sri Lanka has more than 40 years experience in library management (at Ceylon Steel Corporation, National Science Foundation and International Water Management Institute); developed the first computerized library system in Sri Lanka; took a major role in developing the education programme of the DIP LIS and has designed a library automation course for library professions in Sri Lanka. He has served as a consultant on library automation at several local and international and national organizations including: Sri Lanka Parliament, UNDP, ILO, IUCN, SACEP, FAO, NSF, National Library, CEA.

Mr Yapa has developed two integrated library software : PURNA (general libraries) and TAKSILA (school libraries) which is used over a hundred libraries here and also abroad. PURNA was presented at an international seminar organized by the American Library Association (ALA) in 1997 at Tucson, Arizona and at the World Congress of Medical Libraries in 2003 at Salvador, Brazil.

He has written more than 100 articles including two monographs; most related to library automation. Thrice President of SLLA, Mr Yapa held several positions including Education Officer, and Vice President of the SLLA and has been a lecturer for approximately 30 years.

Abstract

Union Catalogue provides information for identification, selection and location of monographs in decentralized collections. In a union cataloguing information system, the catalogue data received from various libraries are processed using the guidelines and the catalogue entries that are output from the system are merged to form the union catalogue.

Compilation of an electronic union catalogue involves three major steps: data extraction, data entry, compilation by direct merging or by reformatting or by converting. Five models are identified for compilation of electronic union catalogues; Model I- manual data extraction and data entry and automated merging, Model II- automated data extraction and data entry but manual merging, Model III- semi-automated data extraction, data entry and merging, Model IV- fully automated data extraction, data entry and merging Model V- decentralized catalogues with linking to create a virtual union catalogue. Data fields, data values, data format, display format, index format, and data file format are the areas of standardization in electronic union catalogues. Storage, retrieval and web interfacing software are required. Awareness of availability of a book in the network of libraries, support inter library lending, minimized duplication, encourage specialization, promote national acquisition policy, help copy cataloguing, facilitate literature searches, provide Backups, supply catalogue products and training in cataloguing are the benefits. History of compilation of electronic union catalogues in Sri Lanka can be analysed into four stages: initial stage, ISIS stage, WINISIS stage and OPAC stage.

Keywords : Union Catalogue models; Electronic union catalogue; Standardization; Data formats

1. Union catalogue in bibliographic service

Bibliographic service is a service of providing bibliographic information. Bibliographic services are provided to satisfy declared or undeclared information requirements of users. These are considered prominent information services provided by a library.

Bibliographic services are based on printed, electronic or visual information products. Bibliographies, catalogues, indexes, abstracts, directories, bulletins, digests are examples of bibliographic information products.

Information products are outputs of information systems. Information systems intake data that is key-in or transferred from other systems. The input data is processed using different documentation techniques and outputs information products. In a cataloguing information system, bibliographic data of books that is input to the system is processed according to cataloguing rules and the system outputs catalogue entries.

In a union cataloguing information system, the catalogue data received from various libraries are processed using the guidelines and the catalogue entries that are output from the system are merged to form the union catalogue.

Bibliographic service involves several steps. Data extraction, data validation, data input, data processing, output of information, compilation of information products, dissemination of information products. All or some of these activities could be computerized. When all activities are computerized the service is called fully automated information service.

2. Union Catalogue

Union Catalogue is a document or database which provides information for identification, selection and location of monographs in decentralized collections of two or more libraries. Union Catalogue can be restricted i) to a particular form of monograph (eg. theses) ii) to a subject (eg. environment) iii) to a location (eg Central Province) iv) to a type of organization (eg. Universities). When the location of libraries is the entire country without restricting to a particular area in the country, the Union Catalogue becomes a National Union Catalogue.

Compilation of a Union Catalogue involves three major steps:

Step I: data extraction: bibliographic data is extracted from the monographs and recorded in *input sheets*; this could be organized as a centralized activity where all input sheets are prepared by a central library or otherwise, input sheets could be prepared by individual libraries.

Centralized data extraction is done by a main library which compiles a Union Catalogue for a network of branches.

Step II: extracted data is organized into *catalogue entries* according a standard format. If data extraction is done centrally, preparation of catalogue entries also has to be done centrally. However, in the case of decentralized data extraction, there are two options:

- I. preparation of catalogue entries by individual libraries
- II. sending input sheets to the central library for the preparation of catalogue entries.

Step III: catalogue entries that are prepared by the central library or received by the central library, are merged to compile the Union Catalogue

Above mentioned step II and Step III are automated in the case of electronic union catalogues as shown below.

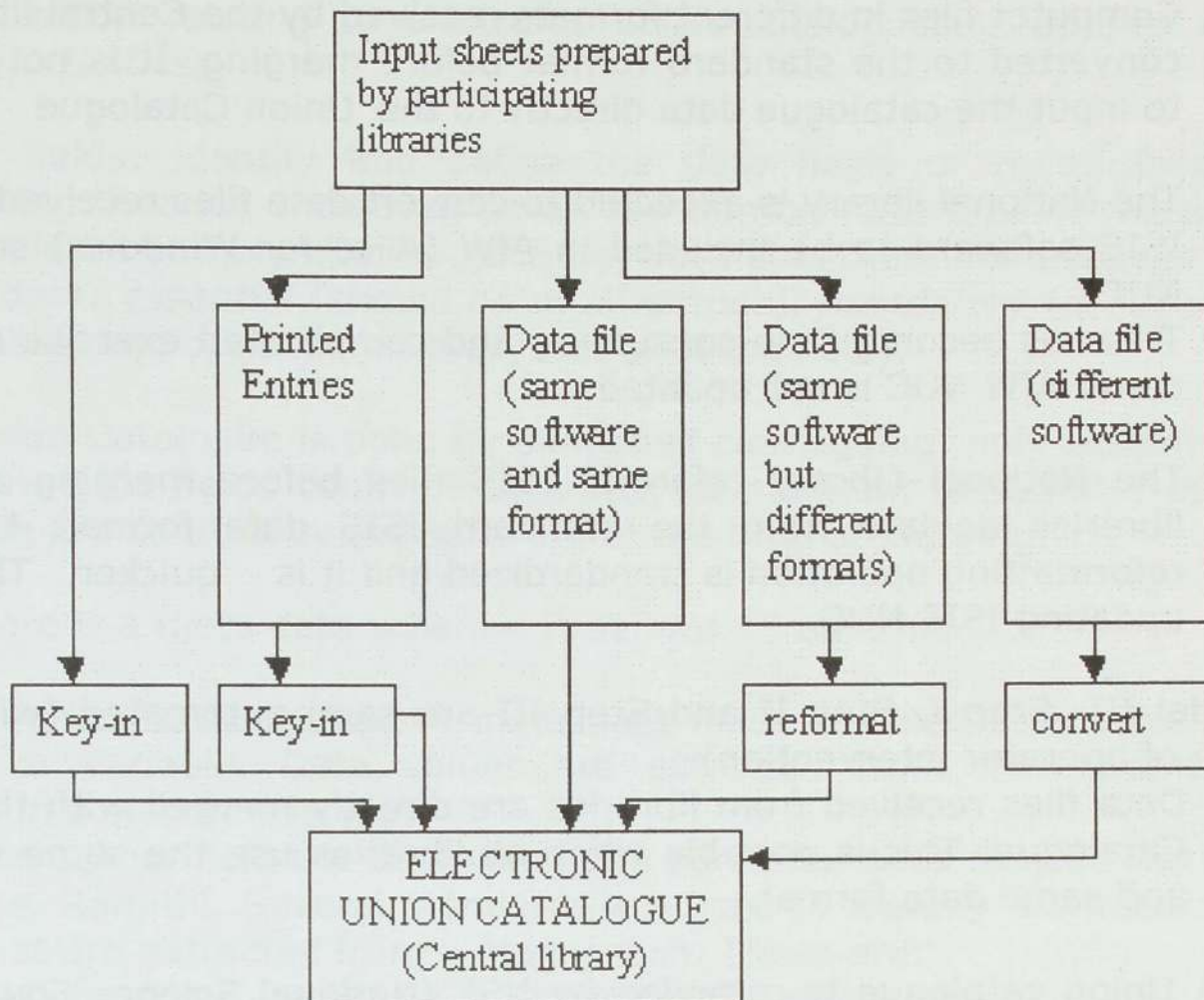
Step II: Data extracted in Step I (recorded in input sheets) is entered in the computer. These will be stored in data records. An electronic form or worksheet is used for this purpose. Guidelines have to be formulated to standardize data entry operations.

A library which enter catalogue data in the computes has two options in sending catalogue entries to the central library;

- I. obtain a print out of the entry to be sent to the central library.
- II. send catalogue entries in electronic files.

Step III: compilation of the electronic Union Catalogue by the central library will depend on the method and standards adopted by the participating libraries

- I. catalogue entries received in printed format: the central library has to repeat step I and step II
- II. catalogue entries received in electronic format:
 - a if *same software* and *same data format* are used by the participating library and the central library, the entries could be directly merged with the Union Catalogue.
 - b if *same software* but *different data formats* are used by the participating library and the central library, data has to be reformatted before merging it with the Union catalogue.
 - c if different *software* is used, data has to converted to accommodate in the software of the central library.



The diagram given above demonstrates the five options of compiling an electronic Union Catalogue.

3. Automation of the Union Catalogue

In the point of view of the central library, five *models* are identified for compilation of electronic union catalogues. With respect to Sri Lanka, two models are not practiced yet. Level of automation in each model differs. Model IV and Model V are fully automated systems.

a) Model I- Step I and Step II are done manually while Step III is automated

Preparation of input sheets (step I) and data entry (step II) are done manually while compilation of the catalogue (step III) is automated.

At present, with respect to some libraries the National Library adopt this model in compilation of NUC (National Union Catalogue). UNICAST (Union Catalogue of Scientific and Technical Books) (from 1983- 1987) and UNICEB (Union Catalogue of Environmental Books) (1994-1995) adopted this model.

b) Model II- Step I and Step II are automated while Step III is done manually.

Computer files in different formats received by the Central library are converted to the standard format before merging. It is not possible to input the catalogue data directly to the Union Catalogue

The National library is expected to convert data files received in ISIS software to be included in AfW (Alice for Windows) supported NUC.

This has become time consuming and complicated exercise and as a result AfW NUC is not updated.

The National Library reformat ISIS files before merging as some libraries deviate from the standard ISIS data format. However, reformatting operation is standardized and it is quicker. This help updating ISIS NUC

c) Model III- Step I, Step II and Step III are semi automated (with some degree of operator intervention)

Data files received from libraries are directly merged with the Union Catalogue. This is possible when all libraries use the same software and same data format.

PURNA Union catalogue is compiled by NSF (National Science Foundation) by adopting this model.

d) Model IV - Step I, Step II and step III are fully automated (without operator intervention)

Step I and Step II are done by the participating libraries and data files are uploaded to the Union Catalogue in the central library. A password is given to access the database. This is similar to entering data direct to the Union Catalogue by the participating libraries

This model is not practiced yet in Sri Lanka.

e) Model V - Step I, Step II and Step III are done by individual libraries.

This is called decentralized Union Catalogue or virtual union catalogue. A retrieval software will search automatically all catalogues of the participating libraries.

This model is not practiced yet in Sri Lanka. Libraries participating in virtual union catalogue projects use Z39.50 protocol to roam.

4. Standardization

Union catalogue is a bibliographic product created by standardization. If the participating libraries and the central library are not following the same standards, compilation will be difficult, complicated and ineffective. This is true for both manual and electronic union catalogues.

Standardization relating to electronic union catalogues is applied in the following activities;

a) Data fields: identify and define the data fields or meta data. The participating libraries should agree on the number and type of meta data. These could be author, title, subject, keyword etc. There can be three types of meta data: *essential* (should be in all entries), *mandatory* (included only if applicable) and *optional* (a library can omit the field).

If the Union Catalogue is done by simplified cataloguing, only essential and mandatory data fields could be included; to maintain uniformity, optional data fields are omitted by the software at the time of merging.

Dublin Core is a meta data scheme. It defines 15 data fields.

b) Data value: data entered in meta data fields is called data value. Data value is a variable. Data values are extracted from monographs and recorded in a standard format.

e.g. In the author field the data value of a particular book may be written as 'Wijeratne, Ranjith'. Several standards are used to identify and record data values that are extracted from a monograph. These are:

- Cataloguing rules (AACR2) : bibliographic descriptions
- Classification scheme (DDC 21): subject
- Thesaurus (OECD): keywords

In addition to these, the participating libraries also formulate standards. Library code, Language code, Monograph type, call number are some examples. A national authority file may be adopted for determining names of authors and corporate bodies.

c) Data format: Data format defines each data field in a standard method. Following attributes are defined for each data fields: field tag, field name, data type, repeatability, subfield delimiters. In CDS/ISIS, data format is defined in the Field Definition Table (FDT).

Data format is a standard adopted by the libraries in developing the catalogue database. Standard format permit merging of data records extracted from different data bases.

MARC (UKMARC, UNIMARC etc.) is a global data format. Many libraries adopt CCF (Common Communication Format) data format. In Sri Lanka 90% of the libraries use SCBF (SLSTINET Common Data Format). All existing and expired union catalogues adopted SCBF format. In fact, compilation of union catalogues became feasible due to SCBF format.

d) Display format: Data record is presented as a display of the catalogue entry. Catalogue entry can be displayed on the computer screen or can be obtained as a print out. The display should be expressive, uncomplicated

and non distractive. A user could be able to understand easily each element in the display format. It should not be unnecessarily descriptive.

Several display formats are used in the union catalogues.:

Line: author/title

Short: selected data fields

Descriptive: Detailed display.

Some data values will provide hyperlinks to enable access of other data records or external sources directly.

Both NUC and PURNA union catalogues use GENISIS interface to link the ISIS databases to the web. GENISIS provides two display formats a) short and b) descriptive

e) Index format: Union Catalogue is searched to identify, select and locate monographs in the system. Searchability depends on the index of the database. Fields that could be searched and the method of searching will be defined in the index format. In ISIS databases index format is defined in the Field Select Table (FST). Sometimes, index format influences the standards of data values.

NUC and PURNA are searchable by author, title words and location. It is important to observe that classification number is not used for searching these Union Catalogues.

Effectiveness of the Union Catalogue is substantially reduced by data entry errors that appear in the above mentioned fields. The errors are made at the participating library level at the stage of data entry. The central libraries that host the Union Catalogue is unable to correct the data entry errors.

g) Data file format: computer data files contain data that had been entered to the system. Each entry in the data file occupy one record. The record contains data fields which store data. Two types of data files are used in computer systems: variable length and fixed length. Structure of a variable length file is different from that of a fixed length file. Each record in the variable length record has a directory which proceeds the collection of data. The directory indicates the location of data fields with in the record. Various standards are used to structure variable data files. There is a possibility of exchanging data in two files which use the same standard. ISO 2769 is the most popular data file format used in computer systems.

ISIS data files use ISO 2769 and hence it is possible convert an ISIS file into another file that uses the same standard.

h) Software: Participating libraries should use the same software. It enables merge of data files automatically.

Both NUC and PURNA union catalogues use WINISIS software which is the common software used by libraries in Sri Lanka. In fact more than 90% of

the libraries having electronic catalogues use WINISIS. NUC and PURNA can be merged easily as they use same data format and same software.

5. Union Catalogue software

Different types of software is required for the compilation and utilization of the Union Catalogue. These are:

a) storage software: Data of the Union Catalogue is stored in a database. The database has master file and other connected files. Database is created by a special software named Data Base Management System (DBMS). This software permits creation of the data base which consists of the required data fields. Number of fields and the size of the database will be decided by DBMS.

Both NUC and PURNA use WINISIS DBMS. Since UNICAST and UNICEB were developed before introduction of WINISIS, they used the DOS version, CDS/ISIS. Oracle, Access and SQL are also used in libraries but none used for Union Catalogues.

b) retrieval software: retrieval software is required to search the database and display the entries on the screen or print them on paper. Number of access points and variety of search techniques depend on the retrieval software.

WINISIS functions as the retrieval software too and hence libraries using WINISIS need not worry about maintaining two software for their catalogues.

c) Web interface: In the case of union catalogues that are linked to Internet, a separate software named interface has to be used. This software links various data files in the database and displays reports on the screen in the form of a Web Page.

Both NUC and PURNA use GENISIS software as the Web interface.

6. Benefits

Library networks use Union Catalogue projects to strengthen the relationships among the libraries. Union Catalogue is often used as an indicator of the activeness of the network. Objectives and benefits of the Union Catalogue differs according to the expectations, capabilities and commitment of the libraries in the network. Union Catalogue can be properly developed, organized and monitored if it is compiled by a network of libraries. UNICAST and UNICEB were compiled by SLSTINET and ENLINET. However, NUC and PURNA union catalogues are not supported by networks.

It was observed that a Union Catalogue has a wide range of benefits. Major benefits of an electronic Union Catalogue are enumerated below:

a. Awareness of availability of a book in the network of libraries.

This is the basic objective of a Union Catalogue Online

Union Catalogue (web catalogue) can be searched by any computer connected to the Internet. In the case of card or stand-alone Union Catalogues a user have to visit the central library for searching.

b. Support inter library lending.

Purpose of the Union Catalogue is promote lending of books among libraries. Participating libraries agree to loan books to other libraries in the network. Inter library lending could be operated either between the two libraries involved or between the lending library and the central library. Libraries outside the network also can seek this benefit.

c. Minimized duplication

Since a library could check the Union Catalogue for the availability of a book in an accessible library, it is possible to avoid unnecessary duplication of books. The savings could be used to purchase new books. The network should operate a reliable, quick and obligatory inter lending scheme.

d. Encourage specialization

Union Catalogue shows books on subjects so that a library having special interest on a subject could strengthen its collection of the subject. Some networks allocate subjects among the participants for rationalization of acquisition. In such networks, a library will function as the national resource centre on the subjects allocated to it.

e. Promote national acquisition policy

Union Catalogue indicates the gaps in the national collection. The network can take remedial action to fill in the gaps. For example, if the Union Catalogue indicates that no new books on meteorology are acquired by the network, action could be taken to rectify this weakness in the national collection.

f. Help copy cataloguing

A library could check availability of a book in the network before cataloguing. If the book is already in Union Catalogue, the catalogue entry could be downloaded for the local catalogue. This could be done if catalogue entries are prepared professionally. Copy cataloguing save the time of not only the participating libraries but also of the outside libraries.

g. *Facilitate literature searches*

Computerized Union Catalogue can be searched using many search techniques such as Boolean, proximity, and truncation. Since keyword and title words are indexed Union Catalogue becomes a key information source. Since national Union Catalogue will include all locally published books a foreign user looking for books relating to the country will find the national Union Catalogue an essential search tool.

h. *Provide Backups*

Computerized Union Catalogue can supply entries of a participating library in case the latter loses its records. If a library inadvertently loses its electronic catalogue due to hardware or software problem, it could depend on the Union Catalogue to recover the catalogue. Main purpose of the PURNA union catalogue is to provide backup service to the participating libraries.

i. *Supply catalogue products*

Union catalogues that were compiled according to Model I provided catalogue products to participating libraries which had manually compiled catalogues. Products such as catalogue cards, spine labels, books card and accession bulletins could be supplied to a participating library.

j. *Training in cataloguing*

The cataloguers in the participating libraries should be trained in professional cataloguing. The network can organize training sessions for the cataloguers in the network. The professional cataloguers in the network can serve as resource persons. Participating libraries can send their cataloguing staff for in-service training to the central library

7. History of computerization of union catalogues in Sri Lanka

Historical development of the computerized union catalogues in Sri Lanka can be divided into four stages: Initial stage, ISIS stage, WINISIS stage and OPAC stage

a. Initial stage

Establishment of an information centre in 1977 at the National Science Council is a historical event in the development of scientific information in the country. The centre which was named Sri Lanka Scientific and Technical Information Centre (SLSTIC) according to the nomenclature adopted by UNESCO, initiated many information programmes for the development of scientific and technical information in Sri Lanka.

SLSTIC compiled the first union catalogue in Sri Lanka soon after its establishment. At a meeting held in 1977, a group of 7 science librarians agreed to send copies of the main catalogue entries to SLSTIC to compile the catalogue. The union catalogue was named Union Catalogue of Scientific and Technical Books (UNICAST). The librarians expressed difficulties in sending more than one card per book. SLSTIC did not have staff to retype the added entries. Hence it was decided to compile the catalogue as an *author catalogue*. This means UNICAST could be searched only by author. Due to this limitation many senior librarians doubted the effectiveness of UNICAST. This prompted SLSTIC to compile a quarterly bulletin containing new additions organized by subject. In 1978, the scientific libraries were organized into a network named Sri Lanka Scientific and Technical Network. UNICAST grew slowly and by 1982 there were over 30,000 entries from 30 libraries, (Although there were over 75 libraries in SLSTINET only 50% actively participated in UNICAST)

Acquisition of a computer system by SLSTIC was a land mark in the history of librarianship in Sri Lanka. A WANG MVP 2200 minicomputer with 10 MB storage was installed at SLSTIC in January 1983. This was the first computer system installed in a library in the country. It occupied 10' x 10' air-conditioned room in SLSTIC. In order to promote computerization of SLSTIC libraries, UNICAST was selected as the first computerization project.

Main problem associated with computerization of UNICAST was non availability of a software. Dbase and Lotus were the main software used for database development. There was another software compiled by IDRC named Minisis. This was a machine oriented software and hence it required HP computers which were not marketed in Sri Lanka. This situation leads the author to compile a software for UNICAST. A series of programmes were designed for data entry, data modification, displaying and printing, sorting and searching etc. These programmes were written in BASIC language. Due to hardware and software limitations bibliographic details of catalogue records were curtailed. Since there was only 5MB storage, data of a book had to be zipped to 256 bytes before storage.

A meeting of senior librarians organized by the National Library Services Board was held in the Colombo Public Library to discuss computerization of bibliographical services. This meeting decided to select only essential fields for bibliographic description. AACR2 was selected as the cataloguing standard while DDC as the Classification standard. For keywords it was decided to use OECD macro thesaurus.

Union Catalogue model I was adopted for UNICAST. Catalogue cards received from SLSTINET libraries were keyed in to UNICAST at SLSTIC. Libraries were provided with catalogue products such as catalogue card and new addition bulletins.

b. ISIS stage

Introduction of CDS/ISIS software compiled by UNESCO had a great impact on computerization of library services in Sri Lanka. The software was compiled by UNESCO in 1986 and was distributed free of charge through a network of distributors. SLSTIC was designated national distributor in 1987. SLSTIC in addition to free distribution, launched programmes to promote the use of the software. Conducting training workshops, compilation of a user manual, attending to trouble shooting were some of the promotional activities. SLSTIC made two significant contributions; impact of these contributions is still visible in library automation.

Firstly, a common bibliographic format was designed in 1988. This defines the record structure of computerized catalogues. This format is called SLSTINET Common Bibliographic Format (SCBF). It defines each field by standardizing the field tags, field name, repeatability of the field, subfield delimiters. SCBF is used by all cooperate databases of the libraries in Sri Lanka. Compilation of union catalogues by various networks was possible due to adaptation of SCBF by libraries. University libraries used a different format and as a result the data files received from universities had to be reformatted before merging with the union catalogue.

Secondly, for the benefit of libraries that are unable to compile their own computer catalogue, a sample database was designed. This was provided with CDS/ISIS software. This encouraged computerizing projects of libraries. They had to enter data to the sample database and use it as the library catalogue.

UNICAST project ended in 1990. This action promoted NUC as SLSTINET libraries started contributing to it. However, since NUC was not computerized the libraries had to forward printouts to the National Library. This was seen as backward step by the libraries which had computer systems.

The author was appointed as a consultant to the Central Environmental Authority (CEA) in 1992. A project report was prepared giving recommendations on improvement of environmental information activities in Sri Lanka. The consultation report had three major recommendations: a) Upgrading the CEA library to a national environmental Information Centre. b) Creation of a network of environmental libraries with CEA as the central library c) compilation of a union catalogue for the network.

A network consisting of 21 libraries was formed. This was named Environmental Library Network (ENLINET). Major project of the network was compilation of a Union Catalogue on environment. The author was assigned designing and promotion of the union catalogue. The Union Catalogue was started in 1993. It was named Union Catalogue of Environmental Books

(UNICEB). It used CDS/ISIS software and SCBF data format. UNICEB was sort lived. It was terminated in 1994.

In 1994, the author was appointed as a consultant on computerization of bibliographic services of the National Library. Three databases were designed: a) Sri Lanka National Bibliography b) National Library Catalogue c) National Union Catalogue of Sri Lanka (NUC). All three used CDS/ISIS software and SCBF data format. Some entries were common to all three. It was possible to exchange entries among the three databases.

Computerized NUC was started in 1996. There were 48 participating libraries. Out of these 25 libraries had computer catalogues. All these libraries used CDS/ISIS for database development. Most used SCBF data format. Some had had done minor modifications to SCBF. University libraries used a common data format named MIBIS. This means data files received from some libraries had to be reformatting For conversion of data more than 15 reformatting programmes had to be compiled.

The author compiled an integrated library system based on CDS/ISIS DBMS in 1996. This was named PURNA. All major library operations such as acquisition, accessioning, cataloguing, article indexing, membership registration, circulation, serials control, OPAC, current awareness, SDI service could be handled by PURNA. This was first demonstrated at an international conference organized by the International Association of Agricultural Librarians and Documentalists (IAALD) in Tuscan, USA. PURNA was marketed by the National Science Foundation.

c. WINISIS

Windows version of CDS/ISIS, popularly referred to as WINISIS was introduced in the year 2000. Unfortunately by then many libraries which were not pleased with the DOS based CS/ISIS had turned to Windows-based commercial packages. National Library and Documentation Services Board also decided to convert their computer systems to windows-based software. NL&DC decided to use Alice for Windows (AfW) for all its computer systems. Some of the university libraries which were the major participants of NUC also had changed their systems to AfW. The vendor of AfW had agreed to convert existing CDS/ISIS data to Afw format but conversion operation there after did not functioned properly.

Windows based PURNA was introduced in 2001 as version 2 of PURNA. Many libraries which were using CDS/ISIS software acquired PURNA-2.

NL&DC converted NUC to WINISIS. Conversion of CDS/ISIS to WINISIS is a straight forward operation but it was necessary to re-write the display formats. NL&DC had to maintain two versions of NUC; WINISIS NUC and AfW NUC.

The libraries that participated in NUC continued to send their entries in CDS/ISIS and WINISIS files. These were merged with WINISIS NUC

d. OPAC stage

An interface is required to link databases to Internet. When a catalogue is linked to Internet it becomes accessible by any computer connected to Internet. This type of catalogue is called OPAC (Open Public Access Catalogue). OPAC can be searched using Telnet facilities of the Internet. When OPAC is linked to a web page it is called Web Catalogue.

An interface named GENISIS was introduced to facilitate creation of Web catalogues. National Science Foundation (NSF) offered hosting of WINISIS databases in their web site. The catalogue has to be stored in the web server of NSF. NSF agreed to host the PURNA Union catalogue which was created by merging data files of PURNA user libraries.

Commercial Integrated Library software has a special module (Web module) to link the database to Internet. Using the AfW Web module, NL&DC published the AfW NUC in the Internet. With the growth of the database it was observed the AfW web module encountered certain problems. NS&DC later decided to link the WINISIS NUC to their web page using GENISIS.

8. Future of Computerized Union catalogue in Sri Lanka

Since NUC serves as an information source for the foreign users, action should be taken to eliminate its defects and weaknesses. Priority should be given to correction of data errors and regularizing inconsistency in the receipt of data from participating libraries. Following remedial action may be taken for this purpose:

a. Removal of data errors

Union catalogue can be broken into small segments and errors that are detected can be edited. The global editing utilities of WINISIS could be used to revise some records. Two types of data errors are observed: a) spelling errors: these can be removed using spell checkers. b) cataloguing errors: e.g. writing the name of the author without inverting.

The cataloguers of the participating libraries should be trained in cataloguing. The National Library should organize cataloguing workshops. This will improve the quality of NUC in the long run.

b. Regularizing input of data

It was observed that some participating libraries do not send data continuously. Delay in sending data, omissions, duplication should be eliminated. Receipt of data should be continuously monitored. A mechanism

for automatic detection of irregular data receipt should be devised. Having gaps and duplication will weaken the creditability of NUC.

c. Extension of participation

Some major libraries having a substantial collection of books that are not participating in NUC should be persuaded to join the project. Their participation will enhance the usefulness and quality of NUC. Use of a different software for cataloguing is the main obstacle of the participation. Data sent by these libraries should be converted to WINISIS before transferring. The software suppliers should either do the conversion or they should provide the customer library the software programme. AfW and Libsys suppliers are capable of converting their data to WINISIS and they had done this for the backlog of data. National Library should look into this problem. Since the National Library itself is a customer of AfW it should directly communicate with the supplier in getting the conversion programme.

d. Record sheet

National Library should maintain a record sheet to enter details of data submissions. MS Excel can be used to design a record sheet which shows the dates, numbers, and continuity of submissions. Record sheet can be used to identify gaps, omissions, duplications, etc. A monthly statement should be sent to each library for their own analysis.

e. Computerizing participating libraries

Some libraries send their data in paper media (cards, accession leaves, accession bulletins). The National Library re-enter data received in paper media which takes substantial amount of staff time. The National Library should launch a programme to provide hardware, software and training facilities to the participating libraries which are not computerized.

f. Use of advanced techniques in compilation

Model IV or Model V mentioned in paragraph 3 should be adopted. It will be necessary to acquire additional software for this purpose. Library staff should be trained in designing, operating and maintaining the advanced systems that are acquired for this purpose.

g. Web catalogues

The participating libraries should be provided with facilities to link their computer catalogues to the web. Since the National Library possesses a Web Server it could host the catalogues of the participating libraries. (This service is presently provided by the National Science Foundation).

Above recommendations will make the National Union Catalogue a more effective and efficient source of information. It is very clear that NUC should be further developed using new information and communication technologies.

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A School Librarian Recalls, Reminisces and Evaluates

Nanda P Wanasundera

Consultant Librarian

Nanda P. Wanasundera

Ms Nanda Pethiyagoda Wanasundera, an expert in school librarianship is experienced in special libraries too. She is a B.A (Hons.) graduate of the University of Peradeniya, an Associate, a Chartered Librarian and a Fellow of the SLLA and an Associate of ALA (London) (MCILIP., U.K.). She commenced her career as an English trained teacher and changed to documentalists, counseling officer, consultant editor, documentation / information officer, head librarian and to consultant librarian and now works as a free-lance journalist and a columnist of a Sunday newspaper while working for Room to Read organisation. She holds the Post Graduate Diploma in International Relations (BCIS). Ms. Wanasundara has participated in several international training programmes throughout including the International Graduate Summer School, College of Librarianship, University of Wales in 1979. She held the position of Education Officer for three, two year terms and was a council member and a lecturer of SLLA for 27 years. She has authored several books on culture and two books on school librarianship and folk tales.

Abstract

The intention in this article is to, as the title states, recall the writer's years of service in school librarianship and evaluate pluses and minuses in her service as against definitions from the literature. A sub-aim is to enthuse those already in school librarianship and others intending to get into this most interesting and rewarding field of library service.

Keywords: School Librarianship, School Librarian, Media Centres,

Definitions

School media specialist: *Today's school media specialists are expected to wear many hats: manage, teach, collaborate, be a technology expert and forge good public relations. S/he is the manager of an elementary, middle or high school library. The position includes being the supervisor of staff, budget development, purchases, cataloger, organizer of material for retrieval and an archivist. A school media specialist is a teacher of library skills and a collaborator with the teaching staff to improve lessons, thus enabling the school to reach the learning standards required by the State. A school media specialist is up to date with the latest technology – database knowledge, Internet skills, teaching power point as well as instructing staff and students in their uses – (The Librarian in the 21st century from a report of the School of Information Studies, Syracuse, New York.) The US and Canada require teacher certification of those in charge of school media centers.*

More traditional definitions of the old but

completely viable and valuable term 'school library' and 'teacher librarian' are given below. They have been put together from the literature by the writer, to make the definitions comprehensive and easy to understand.

School library: *A school library is a very important unit of a school. It has an organized collection of material arranged and displayed for easy access by students and teachers. The collection comprises books for reference and for home-reading, also journals, teaching aides, maps and globes, other artifacts and audio-visual material. Thus a school library is a resource centre.*

The aim of the school library is to promote the aim of the school; namely, to develop the total personality of the students. Thus a school library helps in the teaching and learning processes; assists in the meaningful use of leisure time; and encourages the reading habit and the library habit, which should be life-long habits.

Teacher librarian: *A member of the tutorial staff who is in charge of the library, to develop its collection and give services. S/He may or may not have periods of teaching within the school curriculum, but s/he should teach library skills to the students, especially those in the primary and middle schools.*

Introduction

I shall henceforth use the first personal singular pronoun instead of the impersonal 'the writer' I used at the beginning of this article. It makes for easier writing and the forging of closer rapport between writer and reader.

Before I proceed to the topic in hand: i.e. recall and evaluate, I feel it imperative that I briefly make clear how and when I got into school librarianship.

I joined the field of librarianship comparatively late in life after having been a secondary and senior secondary school teacher for 20 years. I entered the SLLA course in library and information science for the heck of it, having time on my hands. Completing the SLLA Intermediate Course, I, along with a couple of others, sat the Library Association (UK) external exams which were at their tail end in 1974, the LA soon giving up its conducting of exams and shifting over to collaborating with universities in the UK that ran librarianship courses such as the College of Librarianship Wales and the University of Loughborough. It was Ms Manil Silva, one of our lecturers, who encouraged us to sit the LA exams. Hence much grateful thanks to her.

One other teacher and I succeeded in all the LA exams and I was recruited to the newly set up Sri Lanka Scientific and Technical

Information Centre (SLSTIC) of the National Science Council (NSC). After six years of documentation work, I felt a shift in my career was needed and so I applied to the Overseas Children's School (OCS) at Muttiah Place, Colombo 2, and was selected to be Head Librarian. My having teaching experience and holding both a bachelors degree and teacher certification were plus points in my favour, so also my competence in English and having had training abroad due to opportunities given me by NSC under Unesco projects.

I served as Head Librarian at OCS for nine years. I oversaw the move of the library to the new campus of the school at Pelawatte, Battaramulla, in 1985. An upheaval totally uncalled for necessitated the rebuilding and refurbishing of the primary library and shift to and back of the collection of the senior library from the US Embassy, after the JVP instigated destruction of the entire school in 1989.

With a reorganization of the management structure of the OCS in 1990, I, as Head Librarian, was in a Board comprising seven heads of department. These points to the central position the library occupies and should occupy in a school. Hence the library was represented in managerial activities of the school ranging from in-depth studies and strategic planning to curriculum development.

In 1991, a three year contract I had signed with the management came to an end with both the school wishing to recruit a foreigner in my place and me wanting to opt out. I entered a one-year contract to serve as Education Counseling Officer at the British Council, after which I was selected as information officer in the to-be instituted Centre for the Study of Human Rights (CSHR) within the Law Faculty, University of Colombo. Due to reaching mandatory retirement age, my service was terminated after nine years in the CSHR. I went gladly into retirement. But not for long. A librarian cannot be kept down, seems to be a truism. I was appointed Library Consultant at Stafford International School (SIS) and worked part-time in this capacity but actually more as a librarian, joyously interacting with students and staff and helping to build the library collection and ensure good service.

I am in contact with teacher librarians in many districts in Sri Lanka through the INGO – Room to Read. Upali Yapa and I train the teacher librarians of schools that have been assisted in developing their libraries through assistance given by Room to Read.

Evaluation

Libraries and Collection

A varied collection and resources available reflecting a true media centre, and freedom of action were present at the OCS. We had a huge budget

allocated to the libraries. The primary library was very efficiently run by Priyani Amarasinghe Keenawinna, who was at OCS much before me. We were five qualified librarians- two in the primary library and three in the senior library - senior library served secondary and senior secondary students and staff.

At SIS a junior library caters to Nursery and Kindergarten children up to Grade 2. The other library has two rooms, one for Grades 3 through OL; and one for AS and AL level students and staff. The collection - fiction and non-fiction - in the two rooms reflect classes they are suitable for. Sita Weerasuriya is the librarian while young Nuradha Boteju assists.

Money is made available for purchasing whenever requested. While at OCS a major order went overseas in May through internationally maintained channels. Orders being sent to overseas publishers and agents have not been so easy or successful at SIS.

In both schools classification was/is by Dewey Decimal Classification Scheme (not the school edition) and simplified cataloguing by AACR II. SIS has a card catalogue but will soon computerize. OCS has made giant strides in computerization and networking with the library catalogue accessible from any classroom or office in the entire campus.

The collections in both libraries comprise print and non-print material plus posters, maps and catalogues for teachers to make their selection. At the OCS the collection was vast and comprehensive. Artifacts such as types of rock were available at OCS as also a wide selection of CDs, DVDs for supplementing teaching and video tapes both documentary and fiction. The library oversaw the AV room.

Reading and library habits

The second definition above clearly states that one aim of a school library is to inculcate the reading habit and also the library habit in school kids so they develop into life-long habits. We librarians do this overtly and subtly. How far we succeed is not really measurable, but the more books that are borrowed the more kudos we can ascribe to ourselves as having achieved our aim, at least with some children. Also, when it is apparent that kids come into the library with eager smiles, it is apparent the library habit is in them.

How do we get about inculcating the reading habit in our school children? Firstly, by consistently improving the collection. Oft times, even when money is available, this is no easy task since our local bookshops are very heavy on Blyton, *Goosebump series*, Mary Kate and Ashley trivia and very light on prize winning children's literature like the Carnegie or Newberry Award winners. My policy, tested and proven, is to have even trivia in the library so kids start reading and then they could be guided to

the classics and approved of children's fiction. I always have the complete sets of Herge's Tin Tin and the Asterix series. They may be categorized as comics, but comics of a high order and absolutely delightful to children. Judy Bloom's books were very popular but we weeded them out of the OCS collection (a parent complained) and I never bought any for the SIS Library.

Two journals that could be consulted for selecting suitable children's fiction for all ages are the *School Librarian* and the *School Library Journal*. To get a local publisher to supply us with books selected from catalogues of say OUP, CUP, Heinemann and other overseas publishers is no easy matter. Just sending a small order to Amazon.com too does not work. But that is an avenue to pursue.

In both schools the journal collection was comprehensive with magazines such as *TIME* and the *Economist* plus at least one journal per subject – *National Geographic*, *History Today* et al; and a journal or two each for boys and girls specifically.

Selection and ordering were very streamlined and massive at OCS; the librarians had only to submit the orders and everything was looked after until the ordered material was delivered to the library, checked and ownership-stamped. My policy has been that librarians select and order fiction and teachers advice the librarian on non-fiction intake.

How do we encourage the library habit? Primarily being nice ourselves. We librarians welcome the kids to the library; speak with them; show an interest in their reading and choice of books taken on loan. Never ever have we large SILENCE boards strung all over. We make the kids feel able to relax in the library. I know discipline is called for but we cannot expect absolute silence nor little robots in the library.

Cooperation in the teaching and learning processes

The definitions above include the phrases: "...collaborator with the teaching staff to improve lessons ..." and "...helps in the teaching and learning processes..."

At OCS this was very much so since much of the teaching was through projects where students researched and wrote reports. For example in the teaching of social studies, units such as different countries, or weather systems were assigned groups, guidelines clearly stated and the children spent the subject periods for a month, sometimes, in the library. There was collaboration between teacher and librarian and material provided for their research. Oftimes loans from other libraries, often institutional, were obtained and interviews arranged for students with experts in their research fields. This was facilitated to a considerable

extent in assisting the International Baccalaureate students in their researching selected topics for their extended essay.

Were we collaborators with the teaching staff? Certainly yes, with us going more than halfway to meet them. A request for information, be it a press clipping or journal article, had us going to the staff room to deliver the requested item. We maintained good public relations with faculty members and admin staff going at it in a deliberate way, knowing how important good relations were, if we were to fulfill the above stated requirements from a good school librarian.

Teaching library skills

In both schools I have initiated and carried out programmes for teaching students from Grades 3 through 8 how best to use a library and exploit it for their benefit. If you ask for success rates in their acquiring the skills, I have no statistics to present. But the year long programme would surely have been of benefit.

Methodology followed was to divide a class into two groups; that way the group was manageable since not being a teacher per se, kids could play up. At OCS, one group sat and read magazines etc while the other group did the lesson with me (unwillingly very often!!). At SIS one half of a class would be in the computer lab while the other half was in the library.

The programme included orientation to the library; what call numbers meant and the arrangement of books on the shelves; the use of retrieval tools like the catalogues; and the use of reference tools such as encyclopedias. I went further. Introduced too was the history of libraries, history of paper and printing and the makeup of a book and what journals are. Lessons were simple and in accordance with the grade taught. That last word is a misnomer. I tried hard not to 'teach' but to introduce and encourage self discovery in the library. Every lesson was followed by a simple test to facilitate consolidation. These and notes sometimes given were filed in the children's *Library Skills* files.

The first definition has the phrase "*up to date with the latest technology and database knowledge*" Theoretically I could pass muster and of course I word process, e-mail and lightly surf the Net. But the younger librarians came in here. Both at OCS and SIS, the young assistants were very computer competent, and thus in this too the services we gave was alright.

Services

The other librarians and I always tried to give a good service with a smile, not a frown, though foreheads would crease themselves at long over-due books and students chatting in the library, not reading. This

was a definite feature: at OCS due to books being relegated second or third place with so many distractions available to the expatriates; at SIS due to this reason plus the language barrier to some, though all teaching is in English in preparation for London Os and As.

Our smile was genuine and constant, since it's so good to work with kids, every one an individual with special characteristics. I must admit most kids preferred to be freer with the younger librarians, but that was OK by me.

One extension service initiated, planned and carried out with the assistance of the other librarians who always cooperated, was the holding of Library Days and Library Weeks. The young librarians at OCS were superbly innovative and active. Two Days or Weeks were held at separate times for Grades 3 through 5 and from Grade 6 through 8. The younger kids were extra enthusiastic. We had many events both on the day and before. Film shows, visits to the National Library, National Archives, British Council and American Centre libraries were in-things, as also varied competitions such as poster and poetry and making-a-book. We even ran a treasure hunt once with clues scattered all over the Pelawtte Campus. Most enjoyable were the dress parades called *Fiction characters come alive*, and skits acted out from fiction or history books. An assembly with the dress parades and distribution of prizes (book vouchers) brought the Day or Week to a close. We had centre-staged the library and given the message it could be a fun place and not a room of silent solemnity.

At OCS the two libraries were called upon to hold Sinhala and Hindu *avuruddhu* celebrations which we did with the help of the admin staff. Through two groups of kids dressed as a Sinhala family and Tamil family we demonstrated the customs and rites followed. We had the minor staff pillow fighting and the headmaster, principals and parents taking part in the bun race.

Conclusion

If you flick back to the definitions, the first one states that a "*media specialist wears many hats: manage, teach, collaborate, be a technology expert and forge good public relations*".

If I say so myself, I wore the hats competently, comfortably and with due approval of the Headmaster and Principals at OCS and the Principal and Board of Managers at OCS. One hat I passed onto my assistants. You know which it is!

The most important fact however is that we enjoyed our work, of course with minor hiccups and problems – but never among ourselves in the libraries. School librarianship is so satisfying, if, of course, money is

generously allocated to the library. I have visited many less endowed school libraries in underprivileged areas and my heart has gone out to them.

The tsunami of 2004 had one good result. Schools rose up repaired like the proverbial phoenix and libraries were equipped, even with computers, mostly through the generosity of local institutions, NGOs and INGOs, and philanthropic people. You well know that the SLLA under the leadership of its then President, Deepali Talagala, developed libraries in the west and east coast.

The message in this article is that school librarianship is a career that is satisfying, joyful and meaningful.

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Retrospective National Bibliography: a Theoretical Analysis

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He has written many articles on librarianship, Sinhala literature and higher education and has authored several books in Librarianship and children's stories. Among several Fellowships and scholarships he was awarded he had won the prestigious Japan Foundation Visiting Research Fellowship in 2001. He has represented Sri Lanka in a number of international conferences including IFLA. from his broad experience in ICT application in librarianship he is specialised in quality assurance of higher education. Prof. Ranasinghe has to the library profession profusely by being the resource person / lecturer / presenter and trainer at many on librarianship, human resource and ICT. He is a member of the Board of Management, National Library and Documentation Board.

Abstract

Gives a general overview of the concept of Retrospective National Bibliography (RNB). Examines current definitions of the term and describes the objectives, scope and coverage, compilation process, contents and the problems associated in the production of RNBs.

Keywords: retrospective national bibliography; bibliographic control; national bibliography; current national bibliography

A precise definition of Retrospective National Bibliography is not available in the literature. Indeed, strictly speaking every bibliography is a retrospective bibliography as they all refer to already published materials. Harrod's Librarians glossary (1987) defines the retrospective bibliography as "a bibliography which lists books published in previous years as distinct from 'current' bibliography which records books recently published. Also called a 'closed bibliography', this definition is too general and weak in three aspects. First, it does not refer to 'Retrospective National Bibliography'. Second, its scope is limited only to books. Third, the term 'previous years' is vague. Indeed, many current national bibliographies record items published in previous years. For example, the Australian National Bibliography (1993, preface, p.1) records items published within the current and the preceding two years.

Although it is accepted that a current national bibliography should contain records of 'current publications' the term 'current publications' is not defined. However, in discussing the frequency and currency of a national bibliography, the International Congress on National Bibliographies (ICNB, p.48) in 1977 states "If a national bibliography is to provide an effective service as a selection and acquisition tool, it is essential that its issues appear regularly and frequently and contain records of current publications. An annual volume which appears two or three years late may be an excellent reference work but it cannot be considered as a basic bibliographic selection tool. Equally inadequate is the monthly or weekly issues of a national bibliography in which a high proportion of the records are for materials published *two years previously*."

This perhaps suggests that the upper limit of currency of a national bibliography is two years before the date of publication of a particular volume. If we accept this criterion, any bibliography that records items published more than two years before the current year can be considered as a retrospective bibliography. On the other hand, it implies that any bibliography becomes a retrospective bibliography two years after its publication. However, such a criterion seems to be only an ideal when considering the present state of many national bibliographies. Due to a number of constraints such as delays in the receipt of legal deposit, printing delays and staffing problems, some national bibliographies, especially those of the Third World fail to appear on time. Sri Lanka National Bibliography in the decades 70s and 80s is an example.

According to Katz (1982, p.84) "bibliographies which lists titles published not last week, month, or year, but from 10 to over 100 years ago" are retrospective bibliographies.

In 1981 the IFLA Section on Bibliography undertook a study on Retrospective National Bibliographies and its Working Party was involved in the compilation of an international directory of retrospective national bibliographies. In order to decide what kind of bibliographies should be included in it the Working Party defined *Retrospective National Bibliography* in the following terms:

"Retrospective national bibliography gathers a country's publications on the same territorial basis as the one adopted for current bibliographies at the 1977 Paris Congress (UNESCO/ IFLA). Its purpose is to list all printed documents published within a particular country in order to identify that country's national imprints.

- retrospective national bibliography should take into account the country's present territorial boundaries

- retrospective national bibliography begins when the first book is printed in the country
- retrospective national bibliography stops when the current national bibliography starts (unless there are no cumulative volumes)
- unlike most current national bibliographies, a retrospective national bibliography does not rely on any legislation (such as legal deposit laws) to be exhaustive. Therefore, any inventory compiled with the intention to list without exception the entire national imprint...will be considered a retrospective national bibliography" (Beaudiquez, 1986, pp.20-21).

Accordingly, a Retrospective National Bibliography can be defined more realistically as a bibliography that exhaustively records the national imprint of a given national territory from the commencement of printing of that territory up to the creation of the current national bibliography. As the changing nature of national boundaries may pose problems with regard to this definition, it would be safer to adhere to the existing national boundaries at the time of compilation of such a bibliography.

It should be mentioned here that those bibliographies considered as Retrospective National Bibliographies may not conform to the strict definition of a national bibliography as the "authoritative and comprehensive record of the national imprint of a country...made by a responsible organization" (IFLA International Office for UBC, 1979, p.4).

Commenting on the bibliographies included in the **Directory of Commonwealth Retrospective National Bibliographies**, Cheffins (1981, p.18) states:

"In most cases they were not compiled by a 'responsible organization' and hence were not 'authoritative'. In fact the use of the term 'national bibliography' in the title of the *Directory* is only to be justified by the gloss that 'national' is used principally in the sense of 'national scope'- a subject bibliography, in fact, on a given country.

A similar situation can also be observed from the inclusions of the IFLA directory. It includes the following categories under the name of 'retrospective national bibliography':

1. Retrospective bibliographies which include monographs and/ or periodicals as well as official publications (RNB)
2. RNBs which include documents about a country (RNDB)
3. Special bibliographies about a country also including materials published in that country (RDB)
4. Catalogues of special libraries which can be assimilated into RNDB and printed catalogues of large national libraries which play the role

of RNB since they preserve their national collection. (Beaudiquez, 1986, pp.22-23).

In fact, all current national bibliographies become Retrospective National Bibliographies with the passage of time. However, to facilitate retrospective searching it is recommended that "all current national bibliographies published at less frequent intervals than a year should give a place to the compilation of a cumulative annual volume" (Beaudiquez, 1983, p.310). The IFLA Section on Bibliography has made a number of recommendations on the preparation of annual and multi annual cumulations of current national bibliographies as a step towards the creation of RNBs (Beaudiquez, 1985). Thus, the creation of RNBs after the date of the current national bibliographies constitutes a part of the problem.

On the other hand, filling the past gaps of the current national bibliography can also be considered as a retrospective compilation. As earlier mentioned, a current national bibliography may publish its issues years later due to a number of reasons. For example, Sri Lanka National Bibliography published its 1972, 1973 and 1974 issues nearly five years after their years of coverage.

Objectives of the RNB

According to Marcelle Beaudiquez (1983, p.310), "the primary function of retrospective national bibliography is the identification of all titles in the national production". In other words "its purpose is to list all printed documents published within a particular country in order to identify that country's national imprints." (Beaudiquez, 1986, p.20) This in turn is related to Universal Bibliographic Control" (ibid.).

Describing the Canadian Retrospective National Bibliography Project Michel Theriault (1983, p.130) states: 'Retro's aim is to provide researchers with raw materials and background information to support micro- studies in various disciplines. These raw materials are the bibliographic records within their present arrangement in indexes. They "may be used to answer such questions as: who is the author of *The ballad of the Abolition Blunder-buss*, published in 1861? What is the correct title of a work on rattlesnakes by S.W. Mitchell, published in 1860? The person asking this type of question is likely to be a historian, literary scholar, librarian or anyone else deeply involved in research of a given subject, place or person" (Katz, 1982, p.84).

Thus "a retrospective national bibliography serves more as a reference tool rather than one for book selection and acquisition" (Chang, 1983, p.21).

Horton, in the preface to the **Australian National Bibliography 1901-1950** states: "ANB 1901-1950 should greatly facilitate the work of librarians and researchers who, before its publication, had to check a variety of specialized bibliographies and catalogues at different locations in order to find out what was published in a particular field during this period" (ANB 1988, preface, p.v).

Although it mainly acts as a reference tool "librarians may find it useful for doing retrospective buying and borrowing books on an interlibrary loan". Similarly, it could be instrumental in the building up of a national collection in one library and in the context of a particular language it may constitute a status symbol of that language (Deshpande, 1973, p.177). It also enables "librarians to check the quality of their holdings"(Cope, 1973, p.15).

There is also a possibility of using the RNB as a union catalogue. Attention has been paid to this aspect in the preparation of the New Zealand RNB (Bagnall, 1959, p.104). Accordingly it provides the library location of certain titles. Similarly "library location for every work listed in the Australian National Bibliography 1901-1950, including those contributed by non-participants, can be found by checking the ANB database or the microfiche ABN catalogue" (Gatenby, Still and Witsenhuysen, 1988, p.37). This practice would be very useful in countries where, as yet, union catalogues have not been compiled.

Scope and coverage

Although there are no specific guidelines available regarding the scope and coverage of the RNB, it is said that, in general, it "should follow the same principles for inclusion of literature as the current bibliography". At the same time it is noted however, "the older the literature is, the more freely it should be included" (Larsen, 1953, p.52).

Examination of various retrospective national bibliographies reveals that there are differences in their coverage.

The guidelines for inclusions and exclusions in the Australian National Bibliography 1901-1950 were as follows:

1. Publications of fewer than 5 pages are included if they form part of an eligible numbered series
2. Serial publications such as newspapers, periodicals and the proceedings of consecutively numbered conferences are excluded and publications such as directories, handbooks, manuals and tourist guides are excluded where there is evidence that these were issued frequently with amendments and updates

3. All non- text materials such as maps, photographs, prints and sheets music are excluded as well as non-published materials such as theses and manuscripts
4. Commonwealth and State Parliamentary papers are excluded. These are indexed for the period by specialist indexing services
5. Government legislation- e,g. Acts, Bills and Regulations-is excluded except when accompanied by commentary or annotations.
6. Australian Standards are excluded
7. Reprints are excluded unless there is a significant bibliographic difference from the original work, Off-prints are excluded.
8. Ephemeral material such as sales catalogues, price lists, broadsides and programmes are excluded unless considered to be of particular interest or importance (ANB, 1988, p.vii).

On the other hand the New Zealand Retrospective National Bibliography aims to be as comprehensive as possible. It includes materials such as society constitutions and rule books, prospectus, primary and secondary school texts as well as publications in the Maori language (Bagnall, 1977, p.43).

Materials generally included in the Canadian Retrospective National Bibliography are:

1. Commercially published works; works published by nonprofit groups and individuals; works by government officials and parliamentarians, as long as the author's name is identified; atlases; printed music, including sheet music; reports of annual meetings; municipal and county government publications and non Canadian government publications.

Works generally excluded from the bibliography are:

2. Canadian federal, provincial and territorial government publications; serials; newspapers; all manuscript materials; maps; audio-visual material except when in book form and patents (Theriault, 1983, p.127).

It seems that in these bibliographies scope and coverage have been decided in relation to the nature of the national publishing industry, the research needs of the country and any alternative bibliographical tools available for retrospective searches. It is not possible to form international guidelines on the subject. As in the case of current national bibliography, they should be decided by the national bibliographic agency.

Compilation process

Collection of data

The collection of data on publications to be included in the RNB always poses a number of problems that are different from those of the current bibliography. It is observed that "unlike most current national bibliographies, a retrospective national bibliography does not rely on any legislation to be exhaustive" (Beaudiquez, 1986, p.20). However, the collections of past national imprints based on legal deposit laws could form the basis of the RNB. The national library or an equivalent institute (such as a university library, public library or a national archives) may be the receiver of the legal deposit and "the most appropriate place to start is the library in which the old literature is best represented." (Larsen, 1953, p.52). Nevertheless, "the task is much more complicated than that of compiling a current national bibliography due to the greater defects in former times of legal deposit regulations and to the effects of the normal ravages of time" (Cheffins, 1981, p.18). As a result, in the compilation of a RNB it may be necessary to scrutinize collections of a variety of libraries within the country and perhaps outside the country. Book collectors and private libraries may possess old titles that other libraries do not have (Larsen, 1953, p.54). Hence, visits to libraries, private collections, book shops may well form one of the first steps in data collection. This method was extensively used in the data collection for the Kannada Retrospective National Bibliography (Deshpande, 1973, p.173-4).

"In preparing retrospective national records it will not always be possible to make the records from the actual publications, but instead records may be taken from other bibliographies, from the catalogues of libraries in other countries" (Anderson, 1989, p.6). Hence inspection of catalogues and bibliographies play an important role in the process. For example, the catalogue of the British Museum Library would be useful in the compilation of RNBs in any of the former British colonies. In this regard the usefulness of union catalogues and databases has to be especially mentioned. For example, the Australian National Bibliography 1901-1950 was compiled using the Australian Bibliographic Network (ABN) database.

Requests to authors, publishers and book-sellers and appeals in the press for information may also yield results (Deshpande, 1973, p.174).

Whatever the methods employed in the collection of data it seems that they are related to factors such as the bibliographical tradition and the publishing and library history of each individual country. In countries where there are many bibliographical tools from the early stages of printing, data collection would be less difficult than in those without such tools.

Method of compilation

Unlike current national bibliographies, many RNBs are the results of cooperative efforts. As already mentioned, the very process of data collection itself demands the cooperation of a number of institutions and people. For example, a number of Australian libraries contributed to the compilation of the Australian National Bibliography 1901-1950 (ANB, 1989, p.vii). Canadian and New Zealand experiences also confirm the idea of cooperation. It seems that only through cooperation between libraries and other interested parties can a comprehensive coverage of the past national imprint be made available in a RNB.

An examination of major retrospective national bibliographies shows that they do not follow any unique method of compilation.

In general, however, the ground rules for producing retrospective national bibliographies should be the same as those for producing current ones. The categories for inclusion should be no less, the details of the bibliographic record should be the same (it goes without saying that works should be catalogued by means of an actual examination of copies) and the supportive data-explanation of the scope and the arrangement, outlines (when appropriate) of classification schemes used, and indexes- should be the same (Cheffins, 1981, p.19).

Bibliographic description

One of the controversial problem regarding RNBs is that they may contain bibliographic descriptions of items either physically not checked or perhaps not available. This seems to be inevitable as they have to rely on other bibliographies and catalogues for bibliographic records. For example, in the compilation of Australian National Bibliography 1901-1950 "the National Library's own holdings were mainly catalogued directly on-line from the item in hand but, in order to increase the coverage of the bibliography, when an item could not be sighted a record was created from other sources of information" (ANB, 1989, introduction, p.vii). In the case of Canadian Retrospective National Bibliography also "bibliographic work has not generally been done with the book in hand" (Theriault, 1983, p.128).

On the other hand, with regard to the records of lost books "it may be objected that if a book or pamphlet has disappeared it is not very useful to list the author and title, but this is not so. If it is known to have existed, it can be watched for, and possibly found. Even to know the author and title may be important to the scholar, and tell him something about the author or explain the reactions in other books" (Larsen, 1953, p.54).

In general RNBs also follow internationally accepted cataloguing rules for bibliographic description. Thus the New Zealand RNB uses the 1941 preliminary edition of the ALA Rules for the purpose. The Canadian RNB follows AACR1, with revised chapter 6. The Australian National Bibliography 1901-1950 favours AACR2. It is said that the RNB "is not a commercial catalogue, and therefore information on the price of the book and its original binding are of minor interest- apart from the fact that it will scarcely be possible to discover them" (ibid). Commenting on RNBs in her Directory, Marcelle Beaudiquez (1983, p.314) states that they generally give author, title, place of publication, date, collation (frequently incomplete), pagination or number of volumes.

Arrangement

For a current national bibliography a classified arrangement with alphabetical indexes has been recommended (ICNB, 1977, p.12). However, it is observed that an alphabetical arrangement with a chronological sub arrangement and a subject index is more suitable for a RNB (Cheffins, 1981, p.19). According to Beaudiquez (1983, p.311), "the function of identification retrospective bibliography is best met by recommending the main arrangement to be by author, collective authors and titles for anonymous works, all in a single alphabetical sequence." Australian and Canadian RNBs are examples of this pattern. As the RNB mainly serves as a reference tool, an alphabetical arrangement has a number of advantages over a classified arrangement, such as the collection of all works by one author under his/her name, easy access to known titles or authors etc. However, there are RNBs that follow classified arrangement. Sri Lanka RNB is an example. An entirely different situation can be observed in the Canadian RNB. Its order of entries follows neither classified nor an alphabetical arrangement. It is a succession of entries put in order by a computer assigned sequential number, yet the system is very effective as all major facets in each entry can be easily accessed through a number of indexes, namely: A. author/title index B. chronological index (by the year of publication) C. publisher/printer index D. place of publication/printing index and E. subject index (Therault, 1983, p.129).

Mode of publication

Unlike current national bibliographies, there is no need to publish RNBs at a regular frequency. Generally they are published in chronological segments. The segments can be smaller or larger according to the resources available for the purpose and the research needs of the country. For example, the Australian RNB covers the period from 1901-1950 and consists of 5 volumes: two for the main sequence and three for indexes. The New Zealand RNB covers the period from the beginning up to 1960, in 4 volumes. The Canadian RNB covers the period 1867-1900.

Many retrospective national bibliographies appear in printed format, but some have been published in other formats too. For example, *The Canadiana 1867-1900* was published in microfiche format (ibid). Similarly the *Short title Catalogue Netherlands, 1540-1800* is in machine readable form (Willemsen, 1989, p.5-6). Although the Australian RNB was published in book form it is also available in machine readable form on ABN (ANB, 1989). Recent annual issues of the Singapore National Bibliography from 1967-1991 were published in CD ROM format (SNB, 1993). Electronic formats would be more economical and may provide multiple accesses for retrospective searching.

Problems in the production of RNBs

It seems that RNB projects in general take a long period of time before their completion. The RNB projects of the above mentioned countries are witness to this. While Australia took nearly 20 years, New Zealand and Canada spent more than 25 years on their RNB projects. It can be assumed that a number of problems that are encountered in the process are responsible for this situation.

The first problem is involved with the priorities of the national bibliographic agency. Naturally, the first priority of the national bibliographic agency is the current national bibliography and resources such as staff and finance are directed towards it. The Australian RNB was thwarted several times as the "staff [were] required for higher priority areas (Gatenby, Still and Witsenhuysen, 1988, p.36). In Canada it was only after the full recognition of the need by the National Library that the retrospective bibliography project was re-established in 1974 (Theriault, 1983, p.127). Perhaps the availability of other bibliographical tools for retrospective search could be one of the reasons for this passive attitude towards RNBs. It has been observed that "although the task of compiling official authoritative Retrospective National Bibliographies is an important one and an essential component of universal bibliographic control, it is less urgent than it otherwise might be, insofar as unofficial bibliographies do exist" (Cheffins, 1981, p.18).

Collection of data for a RNB always poses problems. As already discussed, there is no single method to be followed in the process. Hunting information in a variety of sources needs time and staff as well as finance. It is recorded, for example, as the first step of the compilation of the Canadian RNB, that 167 volumes of the basic set of the Library of Congress, *A catalogue of books represented by Library of Congress printed cards issued to July 31, 1942*, were checked page by page and appropriate entries were copied by hand by one person (Theriault, 1983, p.126). With regard to the Kannada Retrospective National Bibliography, "the first and foremost difficulty encountered was concerning the staff" (Deshpande, 1973, p.175-6).

Establishment of the authoritativeness of entries in RNBs also poses problems. Compilers may not have a chance to physically check the items as in a current national bibliography. Reliance on other sources such as bibliographies and indexes is inevitable in a RNB. However, the entries taken from other sources, unless the items are physically checked, cannot be considered authoritative.

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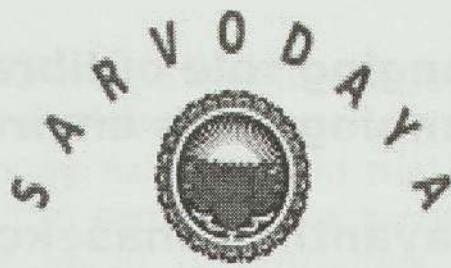
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LIS Profession: changing role of librarian in an information technology rich environment

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Abstract:

The rapid and continuing evolution of technology has invaded library functions and the ways in which the role of the Library and Information Science professionals has changed, and there will be more challenges and competencies to face by the profession in the future. IT has produced a large stock of electronic resources in libraries and created pressure for both library professionals and users to continue learning in order to provide effective services and make adequate use of new information materials. This paper discusses the many roles that the modern librarians play in developed countries today and how Sri Lankan librarians should be ready to improve the knowledge, skills and competencies to acquire that knowledge and training to meet the challenges and to support users by introducing new services to them in this changing environment, to improve the reading habits among Sri Lankans, to emphasize the value of information, to teach correct ways to access correct information easily, within the limited facilities available to LIS professionals.

Key words: Information technology, LIS profession, and Changing professional role, Sri Lanka

1. Introduction:

1.1. LIS profession:

A profession can be defined as "that is based on technical or systematic knowledge of a specific field which is acquired by its members through a prescribed course of training" (Sharma, 2001).

Librarianship was declared as a profession by H.R. Tedder at the 1880 Annual Library Association Conference (USA). Melvil Dewey has said "To my knowledge, a great librarian must have a clear head, a strong hand, and above all, a great heart" (Adhikari, 2004). Adhikari comments on Melvil Dewey's statement and mentions in this way "this has said hundreds years ago but now the environment has changed and librarian needs strong legs to go extra miles and sixth sense to perceive how to

survive and thrive the IT age”(Adhikari, 2004). It also revealed by many literature searches that there are so many challenges, competencies that they have to face today as well as in the future in this information rich environment. But at the same time a professional should not forget that there are so many equal opportunities to improve their skills and competencies and to seek out new clients, improve existing services and system.

In early days it was very difficult to distinguish clearly the boundary between professional and non-professional duties as only one member of the staff was employed to perform all the duties in the library. But at present professional status is determined by the way the position is created and the nature of the duties assigned to the post. Professional organizations and professional bodies like the American Library Association (ALA) have taken many steps to demarcate the difference between professional and non-professional duties. ALA has also tried further to emphasize the importance of continuing professional development and professional competencies in the modern era by its code of conduct given below.

“Library Association, states in its 1983 Code of Professional Conduct:

- i. to keep abreast of developments in librarianship in those branches of professional practice in which qualifications and experience entitle them to engage;
- ii. in respect of those members of the Association responsible for supervising the training or duties of another librarian, to ensure that those whom they supervise are trained to carry out their duties in a competent manner”.

This code of conduct emphasizes the importance of CPD development of library professionals to keep their professional status along with other professionals.

1.2. Impact of development in Information Technology:

The Macmillan Dictionary of Information Technology defines information technology as “acquisition, processing, storage and dissemination of vocal, verbal, pictorial, textual and numerical information by microelectronic-based combination of computer and telecommunications” (Ali, 2006).

Information Technology (IT) has changed the pattern of each and every aspect in the modern society. It has mainly affected the communication system of modern society, and was able to change the way of communication in the world. As a result, almost all the activities in the fields of business, teaching, learning, management, administration, and culture, etc. have been drastically changed during the last two decades.

With the advent of computers and networking systems the main communication methods were changed to electronic and online methods such as e-mail, virtual classroom, online chatting etc. Today there are facilities to contact anyone living thousands of miles away, with the live picture of the person on the screen.

Therefore, technological changes have made our lives easy and connected as it affects all aspects of teaching and learning activities as well as library activities. According to Panigrahi there are three major shifts. The first shift is the transition from paper to electronic media as the dominant form of information storage and retrieval. The second shift relates to the increasing demand for accountability, including a focus on customers, performance measurement, bench marking and continuous improvement. The third shift comes from new forms of work organization such as end-user computing, work teams, management de-layering, job sharing, telework, outsourcing, downsizing and re-engineering. He further mentions that these shifts are related to a combination of factors such as global competition, new computing and communication technology and the perceived need to measure the productivity of knowledge and service workers. (Panigrahi, 2003). Lester comments on these changes in this way "the introduction of technology would provide the professional with opportunities to serve users in a more active way" (Lester, 1994).

As we move towards the next millennium, it is seen that the role of library and information professionals is also changing due to the shifts, such as, the transition from print to electronic media, from passive users to active users, from non accountable services to a demand for accountability, networked environment and focus on the change from individuality to team work. The concept of the global village and the information society, with its far-reaching developments in information storage and retrieval, is radically affecting all aspects of the profession, and particularly education and training of LIS professionals to meet the information challenges of the 21st century. Today communication has also reached the level of transferring information at low cost due to networking facilities. Due to this situation, LIS professional functions and the way of supplying services to their clients are being changed continuously. Therefore, modern professionals have to update their knowledge and skills to supply and share information by using new tools and techniques.

2. Changing role of the librarian:

Librarianship can be also described as "the profession devoted to applying theory and technology to the creation, selection, organization, management, preservation, dissemination, and utilization of collections of information in all formats" (Ali, 2006). As

librarians we have been providing information for others since the origin of the profession. The people who obtain services from us have been changing the society utilizing that information. In the early days of the past, the librarian's main role was restricted to storage of books. In 19th century with the growth of the complexity of their functions, the librarian's role was changed not only for storage but also to select, acquire, organize and disseminate information for those who come for information. The concept of the great Librarian, S.R. Ranganathan, 'books are for use' came into existence. Then organization and indexing methods were introduced to interconnect information supplier and information receivers.

How ever it became evident that traditional role played by the librarian is not sufficient at all for the modern library, because the libraries and their role in the society are changing rapidly due to the development of the IT.

The following are just a few examples that have been proved by a literature search on current developments that may influence the role of librarians:

- * "Increasing pervasiveness of the Internet and the rapid development of digital libraries.
- * New information sectors and information users (e.g. e-commerce, competitive intelligence, health and government information).
- * Changes in the reasons for information seeking and how information is used
- * Increase in access to document delivery and customer service.
- * Move towards collaborative work and collaborative learning.
- * Increased demand for teaching by librarians (e.g. information literacy, information research skills, and media literacy)
- * Need for services for remote users and distance students
- * Move towards problem-based and resource-based learning". (Fourie, 1999)

All of these will require librarians to rethink their actions and the contributions they would like to make. A more important issue, however, is to think of the shifts that are still to come.

Unlike in the past, today the tasks, which are assigned to librarians, are different as they deal with information in many formats such as both printed and electronic. Thus the pattern of information storage and dissemination is changing daily; hence the librarian has to play many roles to achieve their tasks using Information Communication Technology (ICT) knowledge in addition to the traditional expertise.

Further, librarians have to secure a future in cyberspace, among cybrarians, web masters, knowledge managers and knowledge officers. They have to deal with a growing number of contexts for information

(e.g. e-commerce and competitive intelligence), as well as a growth in the information needs of ordinary citizens (e.g. health, consumer, legal and financial information). At the same time librarians are expected to deal with the needs of the digital divide, the information poor and the illiterate. Between the rich and the poor, the haves and the have-nots, demanding business-related needs and survival needs, wireless access and Internet connections and a lack of basic electricity supplies, the librarians must secure their future role and position. On the one hand librarians require the dynamic, ruthless pursuit of new roles if they wish to survive. On the other hand they require empathy, tireless dedication to a cause, commitment, and a service-for-free orientation – if not for the survival of librarians - then at least for the benefit of society at large. This has been predicted by many writers and reveals that 'New roles, changing roles, education and training, and the future of librarians have been debated on for many decades – in fact for each new technological development (e.g. automation and the paperless society, CD-ROMs and the end user threat, and the Internet and disintermediation)' (Fourie, 1999)

Sakthi also comments on the changing role of librarian in this way . 'In this age of information explosion, the role of LIS professionals is evolving to be information specialists. Hence, LIS professionals should give most importance to the above traits in order to handle the information communications technology (Sakthi, 2005).

In such an environment, present librarians should become successful knowledge managers and for that librarians should play a variety of organizational roles or in other words professionals have to be multifaceted and should be capable of performing many roles like being a business professional, a technology manager, a content organizer, a communicator, a change agent and a team player in addition to the other traditional roles. It means that the basics and fundamentals of librarian's skills to provide right information to the right user at the right time are not going to be changed in the digital library environment.

2.1. Librarian as an information agent:

Librarians act as the one who connects information sources, services and people in an organization. They work as independent information brokers or as contact persons and cannot save the day, by retreating to old practices and old methods of reference work. Although, information is inundated and freely available online, users cannot retrieve all the required information that are available on online efficiently. It is difficult and time consuming for users to filter the required information from huge stream of information available in the web. Hence, to be an efficient professional, the librarian has to evaluate and organize all the information to see whether it is relevant, enough, correct, authorized, reliable and comprehensive.

For these evaluations, librarian should have subject knowledge as well as a good command of information communication skills to handle the electronic and printed information sources. Documentation work such as compilation of bibliographies and indexes are professional activities done by many librarians. The role has changed on the way the bibliography is presented in modern society and the present librarians have to prepare subject gateways and webliographies in addition to compilation of bibliographies and indexes for the physically available resources.

In addition to that the librarian has to know the different metadata search engines such as www.vivisimo.com etc. that gives authenticated information and different searching techniques to find and supply metadata effectively.

The modern librarian should have some skills to evaluate the hardware, software that is used for library activities at present. With the introduction of e-services, new professional skills come into play. Building e-collections, management of repositories and sharing information through web pages are main functions that e-managers have to do today. The e-managers have to assess the staff abilities, the range of skills the staff possess and the range of skills they require. In this context information professionals are doing an excellent but undervalued work such as: evaluating services, certifying the quality of websites providing support and training for people using networked e-services.

2.2. Librarian as a knowledge manager:

To day, unlike the earlier days, many scholars, researchers etc. constantly discover new knowledge resulting a day by day increase in information. As a result of that, people say that there is an information explosion in the world. Therefore, librarian's duty is to collect organize and manage them in a proper way to use them effectively.

Librarians have to manage knowledge that is available in the premises or out side, using knowledge management techniques. That means management of knowledge of subject experts who work in the premises or those who are about to retire from the premises.

Further, librarians have been acting as knowledge mangers by introducing reference and referral services to the users, since they are trained in knowledge management.

Initially knowledge management strategies should be developed and then it should be improved according to the needs of the library users using the new technology to get the maximum benefit from the process. The first step in any knowledge management program is to identify where knowledge is being created, where it already exists and where it is needed to support decisions and actions.

For that, the LIS professionals should be confident to handle and manage software and to take up the challenges and competencies. Frank comments on the librarian's ability on knowledge management in this way, "Librarians have all the knowledge, skills and tools to design, develop and maintain effective knowledge management systems". (Frank 1998).

Therefore, another challenge that has to be faced by LIS profession today is tacit knowledge and is never articulated until the need to re-use it occurs. Knowledge management is combined with information audit as it helps success in management and ensures that we manage knowledge according to our organizational needs.

2.3. Librarian as a marketing manager:

Libraries face challenges from variety of technologies, including the most obvious one, the Internet and the www. Today students, academics and other consumers are more likely to try the Internet first for information than checking with a librarian. There are many other places that provide information such as cybercafés and Internet vendors that any one can use at any time without consulting a library. This competition necessitates that librarian has to become a marketing manager who must learn how to advertise and market their services and approach readership. Therefore, a library manager needs to understand this new competition if they want librarians to remain in their positions as key information providers. As information broker or marketing manager, librarian must make the patrons aware that librarians are capable of providing well-organized information, which exactly matches the specific information needs to them. For that librarians have to become marketing managers who must learn how to advertise and market their services. Managers need to develop a variety of competencies beyond technical expertise to succeed in their profession with these new roles and responsibilities. Salmon opinions the present managerial level necessities in this manner, "the soft skills of human resource management, team building, and leadership are the foundation of successful management at all levels of an organization" (Salmon 1999). Salmon further mentions that interpersonal communication skills, problem solving skills and education, customer services skills, talent, promoting learning are also necessary skills and suggests to practice these skills daily to improve managerial skills.

2.4. Librarian as a policy planner:

Today librarians have to go beyond traditional thinking to understand the relative education, strengths and weaknesses of different technologies, and what needs to be done to use technologies effectively. Good decision making is particularly important given the rapid developments in

technology, especially in communication technologies. It is most important to consider here the shrinking budget for libraries and information management. More powerful and more functional technologies are arriving every day and therefore it is important to understand its strengths in terms of its actual applications. It is also important to understand the managerial, administrative and operational requirements for the successful use of technology in implementing new services to users.

2.5. Librarian as a communicator:

The librarian communicates with staff, users, publishers and vendors etc. in many occasions in formal, informal and scholarly ways. Making effective access points to the collection, having discussions, doing number of awareness programmes to new comers, updating card catalogue, online catalogues and developing web pages, etc are some of the ways that librarian communicates with users. Librarian communicates with staff by holding meetings, training sessions and through memos and circulars etc. Further, scholarly communication is done by the librarian with colleagues by writing articles to refereed journals, presenting papers at the national and international conferences, delivering presentations at professional meetings, conferences, seminars and workshops etc. The ways and means of communication by the librarians have been changing rapidly due to technological development and many of them prefer to use electronic format today as it is cheap, quick and easy.

At present librarians communicate by email, fax, telephone, radio paging, cellular phone & telex systems, chatting etc. with others. With the introduction and development of IT based communication systems, electronic libraries can now be developed by any type of a library in order to make the information systems and services more efficient in terms of speed, space and utility. This development in IT has expanded the scope of traditional libraries. The electronic resources, which include CD-ROMs, electronic/digital material, electronic books, journals, databases and the Internet, need to be installed in libraries to attract, and to benefit their users on a larger scale. A user can receive or send the required information over the phone, e-mail and the Internet and the users need not even visit a library physically regularly. As a result of this development, libraries are not for a selected group of readers, but for actively engaged in resource sharing online. Audiovisual aids and multimedia have given the opportunity to librarians to serve a large section of people exhaustively and quickly, by quick communication of ideas. Thus, these developments have provided a large scale of global communication environment to LIS professionals today.

3. Changing role of Sri Lankan Librarian:

There are different types of libraries with different objectives in our country. As the objectives, visions and missions are different, activities are also different to each other. But all are struggling to create an effective relationship between resources and users to enable to give an effective service to the users.

After the introduction of computers to libraries in Sri Lanka, library materials were automated and simultaneously, card catalogue were converted to digital format. Then, most of the work done by the librarians were made easier as there was no repetition of work and work became minimal with facilities of cutting, copying and data transferring, given in the networking system.

Due to network facilities some university and research libraries are preparing to make available their information and resources online and because of that the concept of 'the library is for those who visit the library' has been changed to 'libraries are for all.' The limitation of accessing information from 9am to 5 pm (9/5) was expanded to 24 hours per 7 days (24/7).

Few academic and research libraries were able to support their users with 24/7 online services at present and others were not able to go for it yet due to financial and infrastructure barriers. Therefore, it is one of our challenges to provide 24/7 services to all.

The challenge faced by modern professionals is that they have to be ready to give resources and services to users as and when they request and for that, the librarian should have knowledge and skills of producing and implementing these kinds of e-services which are open to access 24/7 hours. Librarians should be ready with knowledge, skills and competencies to work and also to guide the followers. Due to the technological changes, significant number of libraries in Sri Lanka has automated their collections and many of the academic libraries are on the way towards virtual libraries.

When we consider the application of technology in all fields and development activities in Sri Lanka, it is seen that IT has affected each and every person whether educated, uneducated or poor or rich. There has been a revolution in the field of communication in Sri Lanka as the media of communication was changed from radio to television and the method of communication also changed from printed to digital format, after the introduction of computers and mobile phones. The most popular communication methods in Sri Lanka today is small message services using mobile phones and e-mails using computers. Mesthene describes the result of technological change in this way - "Technological change always results in expanding the frontiers of knowledge enabling something new to be done, setting higher goals". Mesthene (1970)

The government of Sri Lanka has taken initiative to take technology to the villages through the e- Sri Lanka Project using 'Nanasala Knowledge Centres' which was started with 1000 centres in remote areas, while the Ministry of Higher Education and the NIE, National Institute of Education, are attempting to reach the government school teachers through different IT projects. At the same time many Sri Lankan universities have taken several steps to start online academic activities and also to share information among others through e-journal consortiums with the help of UGC. Consortia are a new concept for us as a developing country and it offers a number of strategies and operational advantages to introduce e-services and it reduce the duplication of the purchasing process.

Due to the technological changes, attitudes, necessities and skills of the Sri Lankan changing, they are compelled to use the Internet as an everyday tool to find answers to reference questions. This offers an opportunity for the information profession; to provide Internet and reference services to remote users both within and outside the organization providing links to high quality search services. Therefore modern Sri Lankan LIS professionals should be ready with the necessary tools and information to supply information for them as it is a 'must' for them today. Under this environment, it has become evident that traditional role played by the librarians in Sri Lanka is not sufficient at all in the modern society as the IT has turned the world into a global village.

There will always be changes in the library environment in Sri Lanka, and these changes will affect librarians: their role, job opportunities, self-image, motivation and even survival. Librarians therefore need to find a solution in timely repositioning and role claiming. Like librarians who are in developed countries, Sri Lankan librarians, should also be well aware of what should be done, but seem not to be able to prepare in time. How will we change as this is a problem for us. Many papers and articles have been written on the future and training of librarians, and there are also numerous publications on curriculum development and instructional design. Therefore, we have to consider the above matter and steps taken early by the Sri Lankan professional organization to meet the needs of the modern professionals.

There is a continuing pressure for the Sri Lankan LIS professionals to gain comprehensive, balanced and creative perceptions of computer communication technology and to keep their skills and knowledge constantly updated in order to meet the requirements of information seekers in our country. Application of IT in libraries and information centres raises the efficiency of collection, storage, organization, retrieval and dissemination of information. There is an urgent need that the skills of traditional library personal need total transformation in the changed circumstances and should create an environment to meet the increasing demand for information. But it is true that there is a low usage of information in Sri Lanka and as librarians, we must persuade readers or

information seekers by showing the correct path of accessing information, emphasizing the importance of the current information and improving the usage of information.

Therefore, we should have some knowledge and training on the above said new activities that librarians are discharging today as we know that not everybody can be an IT expert ; nor does everybody has the lobbying skills to argue the case of the information poor. But we should be able to assess their own strengths and weaknesses and position themselves on such a continuum. This will call for metacognitive skills. While considering the IT skills and metacognitive skills librarians should be able to understand their roles and user needs to find a balance between the highly IT-related roles and the more traditional roles to support users effectively. Although the above-mentioned are all valid efforts, which probably made a difference, they have not solved the problem because most Sri Lankan librarians are still poorly prepared to take on the new roles. Even though we have problems of training and getting knowledge on currents trends in the field we must try to introduce some new services and must go beyond our regular work as we are competing with other professions to take the place of a major player in the knowledge economy.

4. Conclusion:

Many changes have taken place in library activities during the past years and much more is still in process. The professional librarian has to ascertain the impact of information technology on the library and will have to acquire skills to cope intelligently and objectively for effective and efficient functioning of a library. Due to the exponential growth of knowledge, the advent of IT, e-publications and also because of the tough competitive environment, traditional libraries and librarianship have become almost nearly obsolete.

LIS subject literature is marked by many speculations on future roles for librarians and how to prepare for these. This article is focused on past experiences and predictions, a selection of new roles, and argues that there should be more attention paid to methods such as information assessing, , management, marketing, and current awareness service.

Today, the LIS profession has attained the status of a full-fledged discipline in Sri Lanka but I feel that it still has a low recognition. The librarian has to recognize the expanding nature of challenges and competencies in his/her role to meet the changing information needs of the user community. As professionals, librarians have to prepare themselves to meet this changing scenario. In view of the ever-changing library scene, the librarian should take a positive approach in providing better services and should continue to prove their usefulness before the non-professionals take over their role. Such an approach will help to

create an environment, which would raise their social recognition among other professionals. Therefore, as professionals, there is a lot more to be done, national bodies like the Sri Lanka Library Association, National Institute of Library and Information Science, National Library Services Board, Universities which are conducting LIS courses should give serious thought to find solutions to the existing problems.

The need for LIS organizations to set an example for librarians and students and practitioners in using information to take decisions on future roles and for claiming new ones should be stressed. They should get formally involved in environmental scanning, research projects on curriculum development and action research on the effect of their teaching approach and assessment methods. It is important to look at the curriculum of LIS professionals and it should be revised and expanded as alternation is required for relevant curricula, including high quality IT trained facilities and reasonable infrastructure in every education institutions in Sri Lanka. In addition, survival skills, and metacognitive skills should be stressed in LIS training programmes. All of these will require librarians to rethink their actions and the contributions they would like to make. A more important issue, however, is to think of the shifts that are still to come. This will help to improve quality products and create skillful librarians in Sri Lanka.

Most of us, librarians in Sri Lanka, do not have infrastructure facilities even though they are to some extent familiar with IT knowledge. Therefore, today the librarians, and information professionals have to be self reliant, well-prepared, and conversant with new technologies in order to guide the users according to their needs and their constantly changing demands and better job opportunities and to raise the social position of the LIS profession.

Further it should be tailored to meet the needs of Sri Lankans, to give a better service to them, to share information among others, to domain our services and to compete with other parallel professions.

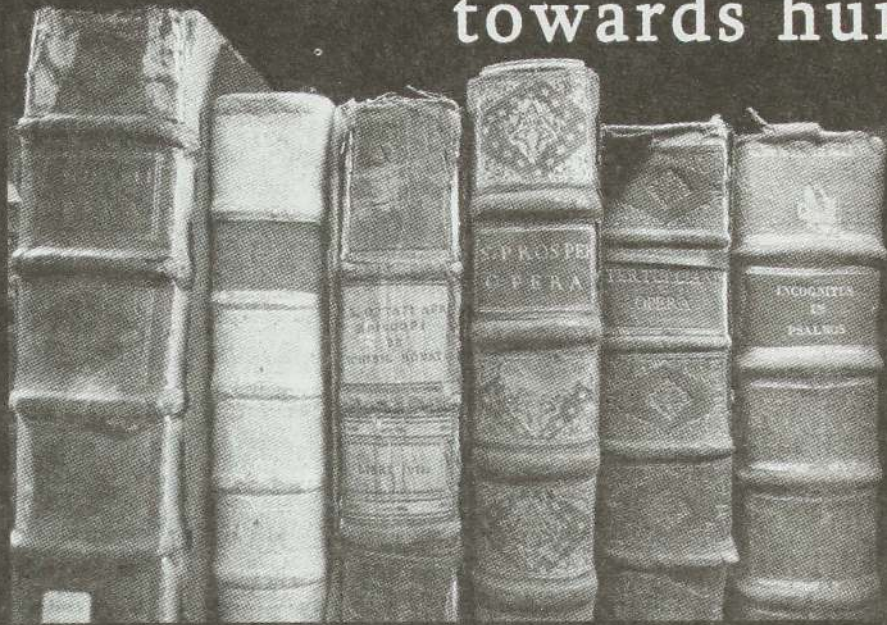
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Importance of E-government Strategy in Providing Government Information (GI): a citizen-centered perspective.

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Abstract

It is also understood that right to communicate and right to access to information are fundamental to any democratic and equitable society. Information delivery by the governments had also become indispensable with concept of FOI, Freedom of Information. Conventional methods of service delivery by the governments are fast becoming inadequate hence the EG concepts, Electronic government emerged as a necessity of the modern information society. According to the survey, E-readiness of Sri Lankan government sector is seen fast improving though the sector is still not attained optimum status. The paper discusses main consideration need to put forth in planning information delivery models through EG, especially collecting all community groups into the governance sphere. Identifying community categories, readiness of GI packages and community access strategy are discussed as significant considerations.

Keywords: Community information; Electronic government; E-portal strategy; community categories

1.0 Introduction

The advent of ICTs as a fast developing enabling tool for delivery of products and services has now redefined the knowledge management within the institutions and changed the nature of deliverables and also mechanisms of delivery. It continues to affect

social political and economic landscapes around the world. This information age paradigm shift is characterized by an integration of service providers, means of access and a prepared citizenry to obtain services through it. In this context the governments and its services have not gone unaffected and the statesmanship become more and more obligatory to the general public.

It is also understood that right to communicate and right to access to information are fundamental to any democratic and equitable society

(Schleihagen,1996). Information delivery by the governments had also become indispensable with concept of FOI, Freedom of Information (Susman, 2001). Regardless the type of government, be it socialist, democratic etc., the role of the government has changed in less than a decade as a mere service provider (Seneviratne, 2001). Conventional methods of service delivery by the governments are fast becoming inadequate to match the proliferating information needs of the modern citizenry. Even though the transaction cost is high initially in some cases, using modern ICTs is the only way to close the gap between the governments and its people. Hence the EG concepts, Electronic government at its digitization, automation and networking side, Electronic governance at its administration policy and operational side, emerged as a necessity of the modern information society.

Story of EG stretches from passive information giving to active citizenship involvement. The concept is established to inform the citizen, represent the citizen, encourage the citizen, consult the citizen and engage the citizen (Developments in EG, 1999) in governance.

The Government exists for the people. All the efforts and initiatives of the Government should, therefore, be directed towards providing good governance. It is said that fundamental concept of good governance is a process of administrative and legal reforms aimed at reducing state controls and regulations to the bare minimum and developing a system that can administer the minimum required controls, but attain efficient and fair delivery of information to its citizens.

There is also a demand emerged from the citizen side for transparency of the government transactions. The situation is much more emphasized since the concept of Freedom of Information (FOI) emerged. Not only is the legal side of the human rights, but also information recognized as one of the social needs of the modern citizen. Samaranayake (2004) and also Narayan (2000) identified the importance of information delivery in alleviating poverty and lack of information as a factor in poverty cycle.

2.0 Government Information (GI) and Citizenship

GI is information produced by the central government, local governments, government departments and public sector organizations, which may be of value to the citizen either as part of everyday life or in the participation by the citizen in government and policy formulation (Seneviratne, 2001). Citizenship information is information produced by the above mentioned government sector information and other private sector or institutional information needed by a citizen as a support for his day to day activities (Marcella & Baxter, 2000). Hence citizenship information covers both government and private sector generated information. Public information (PI) is information created, compiled and/or maintained by the federal government.

Out of these categories PI and GI are created for people by their governments, held in trust by their governments and are made available to their people except in occasions where restricted by law. The GI flows within the scope of public ownership and public trust.

Government institutions have always been providing information through means such as government notifications, newspapers and radio/TV broadcasts which are now treated as conventional media. Providing that same information electronically through Internet is a significant step in making such information more easily accessible to the public, though which does not necessarily reflect governance reform or a political change within the government.

Governments' going on line is a progressive step from the situation where even the most basic of government information is confined to government bureaucrats and departments that are logistically and administratively inaccessible to the public. Under conventional situation, there is a high transaction cost (in terms of time, efforts and opportunities lost) to access timely and relevant government information, which governments turning online can potentially reduce. However benefits of extending ICTs to the world's rural and poorer populations may be enormous (UNCTAD,2003).

Many research and projects in GI are in operation in high income earning countries like USA with much success (Fountain,Mckinnon & Park, 2003). Even developing countries try their best to launch EG systems despite inadequacies still they face within socio-economic, socio-technological and socio-cultural perspectives. Provision of information is also treated as a most important requirement in poverty alleviation policy initiative in developing countries (Samaranayake, 2004), (UNDP,2004). According to the UNPAN "Report on Benchmarking E-government: A Global perspective", in 2001, out of the 190 UN Member States,169 (88.9 %), of their national governments used the internet in some capacity, to deliver information and services (UNPAN,2001). It would be imprudent to state that, maintaining an online government presence is the only way to enhance the flow of government information in the angle of "Public Value" of information provided. Yet E-Governance is one of the vehicles that can gainfully be used in enriching value of government information flow.

3.0 Overview of E-readiness in the government sector in Sri Lanka

The government information is second to 'go online' in case of many countries compared with the private sector, which used the Internet for their business and service delivery years before the governments. In Sri Lanka government sector readiness towards EG status is still little far from the targeted goal. Almost all the government departments have

achieved computerization of internal data and statistics. Web presence is achieved by most of the ministries, departments, authorities, institutions, projects etc. yet, very few sites are uploaded of provincial level and local governments. Even the uploaded sites mostly consist of static pages. Though few leading departments provide interactive services, those do not confirm to full fledged EG dynamism. (Samaranayake & Seneviratne, 2003).

Propagating E-governance culture, policy initiatives and guidelines, delegation of human resources, accommodation of funds, automated information product/service flow etc. is still to be achieved. Nevertheless roadmaps drawn towards EG with the establishment of e-srilanka program and ICT Agency as its implementer, promises a high supply readiness. Many projects are in launch towards e-governance direction, including multi-purpose telecentres established, Vishva Gnana Kendras proposed, Govi Gnana programme, Vidatha centres in operation, Community radio project, supply of internet connection to grade 1 post offices (Sannivedana Piyasa)etc. (Samaranayake, 2004, Seneviratne, 2006). Thereby at least youth of the relevant area is geared to use Internet access for different information needs.

4.0 GI and it's Public Value

E-readiness of the government information itself is to be considered in the information science perspective to evaluate its potential to supply as a commodity with public value. Public value of information refers to the 'value' of the information being provided as determined by the public. Posting information for the sake of being present on the web does not carry any value. The position in Sri Lankan government sector websites, are mostly belonging to this category except an important few. Information with public value is in two categories;

- Information that create awareness on government information product/services
- Information directly to be used/interact with the citizen are treated as valued information.

In case of Sri Lanka, 'demand readiness' towards EG deviates across the urban, sub urban and rural sectors. Citizens in urban areas show higher demand readiness or knowledge about availability of government information and services through internet, while sub urban citizens show almost same rate of awareness regarding the same knowledge. Nevertheless rural and remote areas show completely different picture in this context. According to a research study conducted in rural and remote communities in Sri Lanka, it was found that only 1.3% has the knowledge about online presence of the government information and services. Their willingness to access the GI and related information online

was very high like 92.6%, even though the computer literacy level was counted 0.6% (Seneviratne, 2004).

5.0 System-oriented Information Delivery

Most of the conventional government information delivery systems are created system-oriented rather than citizen-oriented. According to a survey conducted on 10 Divisional Secretaries Divisions, it was found that the system orientation was resulted due to the following factors.

- Policy guidelines/limitations imposed within the government authority
- Administrative structure and hierarchy of the bureaucracy
- Limited availability of information blocks
- Attitudes relating to the significance laid upon information
- Level of technology and technical expertise available

It is important to understand that the situations mentioned above except the last factor, are largely in non-technical nature. The issues and margins are embedded in the traditional structure of the governance itself for decades. The system-oriented supply of information is not only rigid in terms of library and information science, but also a leading factor influencing the public value of the GI. The public value depends upon the level of: Accessibility, Relevance and Usability which lie within the information component delivered (Seneviratne, 2006). Level of availability of these factors govern the level of public value of the information provided.

In conventional governance sphere, information is delivered to the citizens based on the requests for different pieces of information and very much in a system-oriented manner; an active involvement. As observed, within the conventional governance sphere, the tribal, remote and backward communities, minorities and different interests of people, their special habits in looking for information, the knowledge levels or information literacy levels, indigenous knowledge pockets and hidden expertise etc. are concealed or are left out.

However it is imprudent to say that, the GI suppliers are completely ignorant or completely unaware of the above features and values in the existing social sphere. The actual situation is that, the government authorities have not explored the needs of total citizenship with a 'citizen-centric perspective'. Nevertheless, some officials understood the need of citizen-oriented information delivery model, need of reviving the existing policies, rethinking the political approach towards information governance, setting new paradigms for official attitudes and the barriers that hinder the implementation of such projects.

6.0 Citizen-oriented Information Delivery

It is said that E-governance creates a space for the governments to re-engineer themselves.

As Okot-Uma points out,

“ E-governance offers an opportunity for governments to re-invent themselves, get closer to citizenry, and forge closer alliances and partnerships with diverse communities of interest, practice, expertise, conviction and inter-dependence within the context of national development agendas” (Okot-Uma, 2000, p.5)

Objective of the emerging concept is defined and explained by many institutions, charters, famous social icons other than the LIS subject specialists. These include UNDP, Commonwealth, Atlantic Charter, George Soros, Amartya Sen, Mahatir Mohamed, John Paul II, John Rawls etc. Underlying concept of their views can be identified as the “empowerment of the citizen” for a quality life.

The concept ‘Quality Life’ is an emerging concept, that has drawn attention of governments, many charters that venture for different aspects in developing countries, middle income earning countries and NICs including Sri Lanka. The concept Quality Life as one of a MDG (Millenium Development Goal) contains many aspects including Freedom of Information, alleviation of poverty, paradigm shift in thinking stream of the policy makers, education of all & life long learning etc. According to Samaranayake;

“...most important requirement for poverty reduction is the provision of information and services that would help them overcome the poverty barrier. While all who are poor would not be able to benefit, at least their leadership should and in turn help others.”(Samaranayake,2004. p.6)

When planning citizen centric models, there are certain considerations that are suitable to be taken into discussion. These considerations were emerged through a survey conducted by the author (Seneviratne, 2004).

- **Consideration 1 - Community Categories:**

E-governance projects launched with the objective of upgrading the lives of people will have direct impact over the communities. Hence the participation of the general public in these projects is essential. For the purpose, reaching the communities left out from the existing governance sphere is to be identified. When talking about neglected communities, most research and explorations focused on Adivasi or indigenous communities. Other than these communities, according to the survey, there are other ordinary communities who were neglected by public administration or separated by geography. For example, a village called

'Dandenikumbura' (only 5-6 families still living on a Barter economy) in very remote jungle area in Dumbara valley, about 6-7 miles from the remote village Meemure and a fishing village called 'Nugul Eliya'(only 10 -11 families) in Arachchikattuwa DS division are few of the so called alienated communities.

About 93% of the respondents, in the survey mentioned above, said that they have not heard about an 'Information Need', but only know about the 'basic needs' for their living, and had no idea that the information need emanate in fulfillment of a basic need. (see Table 1).

Table 1 -Awareness about Information Needs

		Frequency	Valid Percent
Valid	Heard	20	6.7
	Never	280	93.3
	Heard		
	Total	300	100.0
Total		300	

Seneviratne, 2004

General knowledge and information literacy of these 93% were so low, that they could not identify clearly what are their basic needs and what are the information needs. Even though, they have some level of interactive communication with the government appointed officers at the grassroot level, Grama Niladhari and officers and mobilisers at Divisional Secretary's office regarding their information needs. But tapping the correct information channel, methods of obtaining information, using the obtained information productively were extremely poor. It is also observed that the information dissemination and information exchange among the community were also not confirmed satisfactory in many cases.

These situations which act as limitations to 'empower the citizen' could be minimized if arrangements are made to bring these left out communities under the modern governance umbrella, with introduction to modern strategies like 'going government online with native script'. Therefore citizen-centered government information delivery should be created in such a way to bring more categories of people into the governance sphere to empower the citizenship as a whole.

- Consideration 2 - Readiness of Relevant Government Information

Information provision is the other most important consideration as the 'Information Content' holds the very idea of information provision. According to the survey, at present GI provided to the citizenship is supplier (system)-oriented, which means information is gathered and organized according to the terms and facilities available with the supplier and within the administrative framework. Citizen-oriented Information Bases are normally built in consultation with the citizenship. Sometimes information needs are sieved through the statistics available in government offices upon inquiries received for different categories of information, without conducting information need survey at grassroots level. (Seneviratne, 2007).

In Sri Lankan scenario GI user is hardly consulted in compiling information except in rare occasions. According to the author's survey on government information providers operated in 10 DS divisions (Divisional Secretary), non of the suppliers conducted information need survey for complete categories of citizenship information needs (Table 2). It was observed that some of the sectors had conducted need surveys (specific, such as health, agriculture and finance. But 70% of the sample had not conducted any sort of information need survey.

Table 2 – Information Need Survey

		Frequency	Valid Percent
Valid	Complete Need Sur.	0	0.0%
	Specific Category	3	30%
	Not at all	7	70%
	Total	10	100.0
Total		10	

(Seneviratne, 2007)

The situation paves the way for the government offices to hold incomprehensive information. Each DS division has its own 'Information Cell', which contains all the information regarding the division. Some divisions had won prizes for maintaining quality information cells. The problem lying here, in citizenship context is, that there is no use of these

topological information to an ordinary citizen these cells are used mostly by policy makers, administrators and researchers.

What a citizen need is information that support and fill the gap of their day to day information problems that emerge through the maintaining of their own lives, which may be categorized into Survival Information and Life-Support (Specific) Information. Survival Information is, information that needs to live a rightful, empowered citizenship life with basic needs fulfilled. Supporting information is other subsidiary information that supports to attain the survival needs.

Some categories like industrial information (89.5% of the sample), self-employment and vocational training information (94.5%), employment information (60%), market information (90%) etc. are mostly not satisfied at all or information obtained by different channels are not practical/incomprehensive/not clear. It is also gathered that Information provided for some of the need categories does not contain information that can be used readily (Seneviratne, 2004).

This kind of information can be treated as 'Discrete', because of the limitations of the usability But it has to be noted that the nature of information pieces do not match all the available situations in the information need stream. The fact that is to be taken care of is the aspects relating to; Clearness, Adaptability and Authenticity of the information issued to any citizen. Information provision is itself is not enough. If both quality and quantity of the GI is not maintained the citizen is in an uncertain situation in using the information provided. On the other hand good governance is not practical without 'information proper' has not reached the citizen.

In the system oriented way information delivery depends basically upon the availability of information of the supply side. When a need is arisen for information, which is not available in a government office, the citizen has to wait, sometimes for a longtime or find the information from another source. In many occasions observed, the information user was not directed to the correct source in the correct manner or not directed at all. Even if a person is directed to a correct source the individual may not be able to consult the required source due to various reasons like, transport and traveling, location and distance, weather, financial difficulties, available format, technological problems etc. So that information seeker is in a position to accept the quantity and quality of information pieces supplied by the provider without questioning as there is no alternative to obtain government information.

It is also important to supply this information in an acceptable and usable format by any citizen. Both conventional formats and modern formats need to consider in this context as communities scattered in a country, have different information grasping levels due to the socio-economic

factors like education, language literacy, information literacy, income level, occupation, geographical and infrastructure conditions etc. (Seneviratne, 2004).

Therefore government information should be delivered to the citizen in required quantity, in required quality, in required format, at correct location and on correct time (at the event the information is needed). Thus Government Information Provision can be standardized as;

$$GIP = I_{qn} + I_{ql} + I_f + I_{lo} + I_t$$

The abbreviations used interpreted as; GIP = government information provision, I = government information, qn = correct quantity, ql= correct quality, f = correct format, lo = correct location, t = correct time.

The drawbacks discussed in information provision of the governments can be solved through e-governance models by minimizing the drawbacks that would occur due to inefficient provision of government information. Factors mentioned above can be achieved in full by using ICTs in governance models which is the very idea of e-governance systems. Especially, the intended approach to provide GI to general citizenry can be achieved through e-governance based GI and service dissemination strategy, which is known as 'Electronic Portal Strategy'. The strategy will be discussed under consideration 3.

Consideration 3 - Strategy for Public Access of GI -

Government information products and services are created for entire citizenship. As President Clinton in Branscomb asserts,

"Government information is a public asset. The government will promote timely and equitable access to government information via a diverse array of sources, both public and private...."Branscomb, 1994 p.172

The citizenship includes not only the general public but also the institutions and other entities within state boundaries and beyond. So that information access jargon reads as;

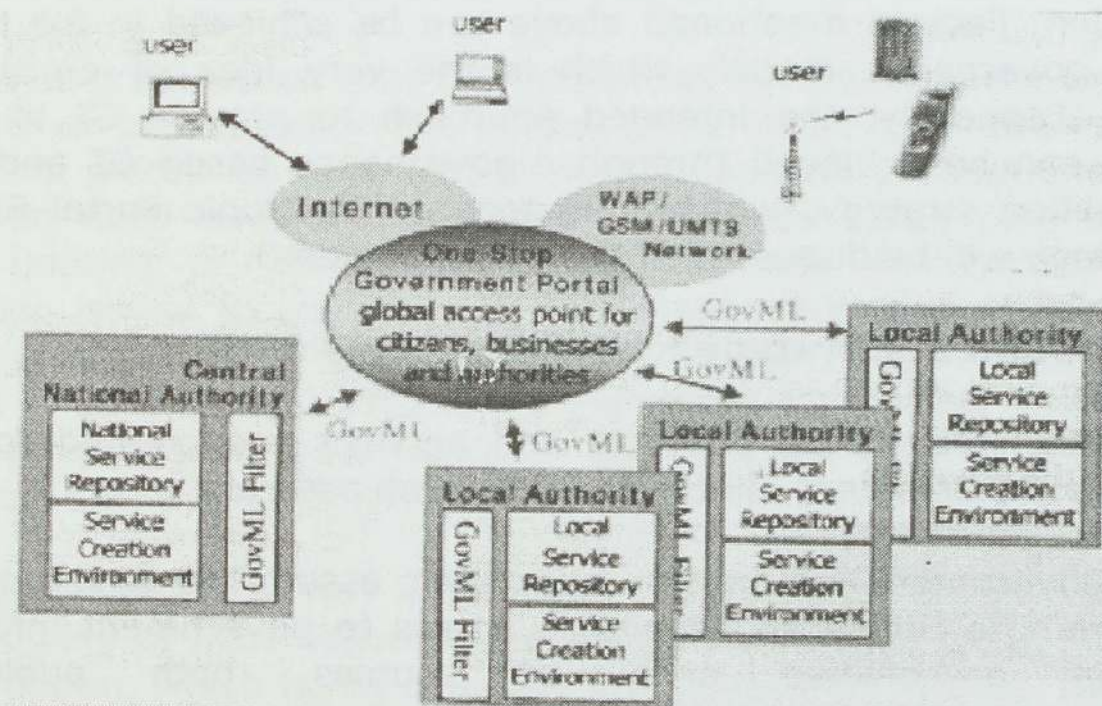
- G2C - government to citizen/communities/public
- C2G - citizen to government
- G2B - government to business/private
- B2G - business to government
- G2G - government to government

The paper treats G2C and C2G as core area of information access. Other access areas could be accomplished easily if the core access is made right. Nevertheless how the Gi is to be made available to the citizen and in what form remains a subject for much debate and disagreement as we

move more and more rapidly into the information age. The modern citizen has also changed his attitudes accordingly. He/She, as a voter, taxpayer, consumer and entrepreneur is prepared to interact with the government whatever the social level he belongs.

E-government information delivery strategy, with enabling ICTs, accommodates all groups of citizens in its planned information flow. The accepted strategy for government information delivery is enabled, via internet activated citizen portals, placed at suitable points approachable by any citizen. The strategy is in OSS model, One Stop Shop Model, where one access facilitates all government and related sites to obtain available deliverables. When planning portals for information delivery in a citizen-centered way, following diagram is useful to obtain the idea, how an OSS portal activates. The diagram depicts a model OSS designed for EC, European Commission, funded European eGOV project.

Fig. 1 - Portal Model of European eGOV Project



ERCIM News No.48, Jan.2002

According to this conceptual model all the services are connected to the user portal to give maximum connectivity and access to the citizen at any location.

When planning the portal strategy, the expected information access is to be considered to give maximum flexible service to the information user, The Citizen. Since the public access is made available in a networked system, simultaneous user access is to be expected. Numbers of portals available for use is not equal to the number of potential citizens intend to access GI. However weight of the government information flow is equal to the number of portals in use at a given time. Summation of public access at a given time interval, can be represented in the following expression.

$$\int_0^t PA = \{(p_{t1}, c_{t1}) + (p_{t2}, c_{t2}) + (p_{t3}, c_{t3}) + \dots + (p_{ti}, c_{ti}) + \dots + (p_{tn}, c_{tn})\}$$

where, PA = Public Access, p_{ti} = An individual portal in use at a given time, c_{ti} = An individual citizen using a portal at a given time, p_{tn} = Number of portals in the EG system, c_{tn} = Potential number of citizens who intend to use the portals.

7.0 Summary

E-governance strategies are to be planned in such a way to approach the community categories that remained out of the government information sphere. The strategy reduces the main barriers that are identified as high transaction cost due to socio-economical, socio-technological and socio-political consequences. Even though the disadvantaged communities are left out from the GI flow, the need for GI may be highest within these communities than the well-off communities as their survival struggle seems higher.

Bringing more number of people into the governance sphere means adding more value to GI. More usage of information automatically increase the quality and quantity of information provided to citizens and it strengthens the information flow. Therefore providing quality information needs measurement that is appropriate as a strategy to overcome the information issues. E-governance models will be the most effective method available to reach citizens with its OSS portal strategy. Other conventional technologies like telephony, wireless and television may be used as complementary to e-governance solutions and in citizen-centric GI delivery, e-governance models act as the bridge between government and the citizens.

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The Role of the Library in an e-Learning Environment

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Abstract

Libraries are educational in purpose and have always played an important role in the realization of educational principles. These institutes have been a support system for educators, providing resource materials and services for their teaching, learning and research purposes in all levels. The paper discusses how the position of the libraries has changed in an e-learning environment. It addresses issues such as what is meant by "e-learning" and what its requirements in a library situation, how can it be pursued and managed in the library environment.

Further, the functionality of a library if it caters for an e-learning community, what are the needs and expectations of users of such a community and how the e-learning resources and services should be formulated to meet these needs, are discussed.

Keywords: e-learning, digital library, e-learning environment, resource

content, resource centre, e-learning information services, e-learning library

Introduction

Libraries have been educational in purpose and have played an important role in the learning process of the humankind at all levels. These institutions have been one of the primary sources used by teachers and learners to search and obtain the required learning materials. Therefore, irrespective of its kind whether it is a school library or university library or a library of any other learning institution, the library has been a good supporting system in the delivery of education. It is evident that advancement in Information Communication Technologies has brought about dramatic changes in the process of teaching /learning, resulting in changes undergoing in all education related environments. It is no exception for libraries that they ought to reposition themselves towards a sustainable future with development in the delivery of their services. The contribution made by the library to educational activities was not recognised proportionally in the past though it is the primary source of information in the process of knowledge accumulation. The situation has

now changed with the emergence of library-related new technologies in the field of education, in relation to teaching and learning.

Application of computers and information technology in educational methods in the last two decades has resulted in various ways and means of learning. This situation is more common in higher learning institutions including universities. Firstly, it was an adaptation of teacher-centred learning using text in the printed form as well as in the electronic form, which was delivered electronically. Today the situation has changed to a more advanced nature; a student-centred approach whereby, a combination of highly interactive information services and communication technologies is being used between teachers and students throughout the learning process. This method of learning is called e-learning. The basis of this method of learning is similar to that of distance learning model of universities that is popular in education systems of many countries. The e-learning delivery model is more common and being adapted mainly by universities and colleges today, therefore, for the purpose of the article, the discussion is focused mainly on a situation in universities. E-learning environment in the context of universities will be discussed with its implications to the library setup. Further the functionalities of the library in an e-learning environment will be described with an account on the requirements and expectations of the user community of such a situation.

Libraries (university) in general:

The aim of traditional libraries has been to collect, store, organize and make available to users, documents of various kinds, and delivering a user-oriented information service. The prime obligation of information service delivery of any university library has been to the members of the institution of which it forms a part. (Ojedokun, 2003). The members include mainly the academic staff (teachers), postgraduates, undergraduates and researchers. The main library mission here is to provide the community, infrastructure and resources needed for the purposes of teaching, learning and research in the university. In supporting this mission and the creation and assimilation of knowledge, the conventional university libraries have developed reference collections (books and other formats) and reference services, lending collections (books, audio-visuals, CD-ROMs maps, films, etc.), collections of journals and other media of information. Libraries with sufficient funding and human resources have extended this venture further to develop collections of electronic resources and services, online journals and access to online databases and virtual versions of library services such as online-reservations, online-registration and online-circulation of resources, further, activities such as access to materials and databases outside the physical confines of the library. To enable users to use these resources and services effectively, libraries also offer user education programmes and provide various guides to their users.

The above role of the library has been satisfactory in the teacher-centred approach of teaching and learning in universities. In this approach, the relationship is more between the teacher and the librarian. It is the teacher who decides on the course content of the courses offered by the university. Courses are taught in the classroom according to a timetable, therefore it involves a face-to-face learning between the teacher and the student. The students are provided with handouts and reading lists. The library materials are procured and ordered by the library staff according to the requests lists provided by the academic staff. Students are being instructed to use the library materials specified in the reading lists. Thus, a majority of the library collection remains unused by the students.

e-learning:

Various definitions can be found for 'e-learning' as given by various authors and organizations. A few of these are as follows:

- According to Uys, as cited by Ojedokun (2003), e-learning has been defined as the appropriate organization of information and communication technologies for advancing student-oriented, active, open, collaborative and life-long teaching-learning processes.
- E-learning covers a wide set of applications and processes such as Web-based learning, computer-based learning, virtual classrooms and electronic collaboration. It includes the delivery of content via Internet, intranet/extranet (LAN/WAN), audio and videotapes, satellite, broadcast, interactive TV and CD-ROMs (Kaplan-Leiserson, 2001).
- It implies the use of Web technology to facilitate the whole cycle of learning from initial sign-on to final certification, with a range of operations in between, and with no or little, physical interaction with the host university. This replicates the distance learning model and has parallels with the operations of distance learning universities (Akeroyd, 2005).
- On the other hand, in the university and college context, e-learning is a hybrid of "traditional" face-to-face teaching, with electronic delivery of content and services built on and, where appropriate, with administration and related tasks also being web-based (Akeroyd, 2005).
- e-learning is the effective learning process created by combining electronically delivered content with support and services (Waller and Wilson, 2001).
- e-learning includes "a range of activities, from the effective use of electronic resources and learning technologies in the classroom, through to a personal learning experience enabled through individual access at home or elsewhere"(The Department of Education and Skills, UK, 2002).

As these definitions implies, E-learning can be described as a process and not as a technology. To enable the interactions offered in this process, schools, colleges and universities have developed learning platforms called virtual learning environments (VLEs) in the UK and learning management systems (LMSs) in the USA (Akeroyd,2005). These systems allow academics to design, develop and deliver learning content in a web-based platform where interactions with students and open discussions are facilitated. In some universities, these VLEs support various other institutional functions such as administration and finances, which are related to academic courses. Most common method of implementation of VLEs is to operate methods of traditional teaching and learning through the Web domain and delivering extant learning (course) content, reading lists and handouts through the web. Students are instructed to assimilate these materials and create knowledge by themselves and to undertake exercises based on the content. In such an e-learning environment the basic requirements attribute to technology-enhanced classrooms, video-conferencing for distance learning and a library as the learning resource centre with appropriate staff training.

e-learning has become very popular internationally because of the various benefits it offers to the institution, academic staff and students, which include its potential to assist the university in preparing its students for effective participation in the wider information society, to support student-directed learning, to provide more flexibility for student learning, to provide additional material for students and to enrich both staff and students through collaboration with external parties(UBL,2001). However the pedagogic aspect of e-learning is not well understood and is yet to be resolved.

Library in an e-learning environment:

Transition of educational methods towards electronic environments, and expansion of knowledge in various subject areas with the advancement in information communication technology has brought forward more challengers in the society. It is evident that there exists a gap between the technology 'haves' and 'have nots'. Even in technologically developed countries this situation is common among individuals and among different societies. Today, the literacy in technology or information literacy has become a requirement in the life-long process of learning. Learning resources and learning tools have become essential items for an individual to be equipped with. The digital divide thus created in the society in an electronic environment needs to be addressed to and one way of over coming the problem is by establishing electronic resource centres. It is in this context that libraries can contribute by converting themselves from traditional library situation to electronic library systems to accommodate the new challenges. Libraries should refocus their role in providing services and make necessary changes to convert themselves into Learning Resource Centres (LRC). Today the concept of learning

resource centres are called by variety of names such as library and information services, information resource centres, learning centres, e-learning library etc.. A learning resource centre is different from a digital library which can be considered as a technologically developed traditional library which evolved during the past two decades. A digital library constitutes with, in addition to the conventional collection, electronic databases on the Internet, the World Wide Web (WWW), CD-ROMs and online subscriptions to journals through databases such as EBSCO Host, Blackwell Synergy, Dialog, Science Direct, Ovid, and Cochrane Library etc. These libraries offer traditional library services with added-on services such as online journal access, Internet services, online subject searching, access to digitized materials etc.

However, services delivered by a digital library do not automatically provide an appropriate learning environment for learners in an e-learning environment. It is obvious that e-learning reflects a student-centred learning approach. The basis of e-learning is not 'knowledge acquisition', as in traditional learning methods and it is the 'creation of knowledge' in the present collaborative approach. In this scenario the needs and the expectations of the user community are different and very much demanding.

The most challenging part of converting libraries into e-learning centres is the development of infrastructure facilities which is very much depended on decisions made at higher level, availability of funds and availability of personnel with expert knowledge in Information Communication Technologies. In an e-learning environment, in addition to ICT facilities, the libraries are expected to provide interactive learning programmes and to be equipped with online course content, which includes, lecture notes and reference lists, contents relevant to assignments, exercises, tutorials, question papers with model answers, instructions and guides to courses etc. In this context, a learning resource centre is much more than just a physical entity, but one with wide-ranging educational and organization consequences (Ojedokun, 2003). Ojedokun describes LRCs as active centres with computer clusters and information skills training rooms, where formal and informal teaching occurs. According to McDonald, as cited by Ojedokun (2003), a learning resource centre contains a variety of learning resources, with strong emphasis on electronic sources and other non-print media, and houses a large number of computers and other equipment, while some universities provide media services, curriculum innovation centres, teaching and learning development units and language centres, thus transforming the library into a "teaching-learning laboratory". In these universities the e-learning library is integrated into the e-learning system where the teachers and learners are facilitated to locate, track and manage required learning activities. Here the users of the system are provided with an environment, with the help of effective search capabilities, where they can retrieve, store, reuse, create, manage and deliver learning

materials using the resources provided by the e-learning library. In these systems, an integrated interface is used to a considerable degree allowing the teachers and learners to access simultaneously to databases in the library and elsewhere.

According to Wang and Hwang (2004), an e-learning library should be able to make the following contributions in an e-learning system:

- On-demand e-learning services; providing learners with learning materials through electronic full-text and/or multimedia databases on demand and electronic document delivery services.
- Live on-line e-learning services; providing access to learning contents through programmes arranged between reference librarian and the user.
- Knowledge based packages; constructing electronic databases containing learning contents in a searchable environment.

In addition, for effective usage of resources, the library should be in a position to classify and catalogue the learning content to develop databases of descriptive metadata for the collection of contents. These databases of metadata should be designed to include effective search mechanisms for proper identification and retrieval of learning materials.

One of the important aspects of the collection development of an e-learning library is the learning content (includes, lecture notes and reference lists, contents relevant to assignments, exercises, tutorials, question papers with model answers, instructions and guides to courses etc) relevant to the courses offered by the institution. Therefore it is important to examine the quality of the content; what learning resources and services should be included and to what extent and how these should be organized and presented for use by the learners.

Majority of the learning content would be designed and created by the teachers; the academic staff, who are responsible in conducting various courses offered by the university and are made available at the library. In this context, it is essential that the library maintain close relationship with the teachers and the learners of different faculties. In creation of descriptive metadata a policy decision has to be made whether it is to be undertaken by the academic staff or by the subject librarian or by combination of the two parties. However the classification and structuring of the metadata to construct searchable databases is totally the responsibility of the librarian. Further it is essential that librarians are knowledgeable to a certain extent about the pedagogy of the e-learning system of the institution. In this context it is important for the librarians to attend to academic and curriculum related meetings with the academic staff in the faculty. The subject librarians need to work cooperatively with the faculty in integration of resources into various stages of the

curriculum. These developments in the library imply that the traditional role of the librarians is now changed drastically to a role of a more subject-oriented, teacher librarian in an e-learning library or an information provider in the electronic sphere. Librarians are further required to work cooperatively with various other categories of staff of the institution such as, network-engineers, staff of the Information Communication Technology Centre, hardware and software engineers, programmers, system analysts etc.

Human resource factor is one of the important aspects of an e-learning situation. The human resource management of the e-learning library should be responsive to the changing needs of library users, as well as the changing nature of the outside environment. Libraries today are undergoing many difficulties due to shortage of trained staff to face the new technological challenges. Especially in an e-learning environment it is evident that there is a tremendous increase in the library transactions, proportional to usage of resources and services than before, therefore staff management of the services relevant to issues, enquiries and customer services would be challenging as there is a dire need for multi-skilled personnel in those service areas. Thus, identifying funds needed for human resource development has been a major issue in developing an e-learning environment. Training staff is as important as developing the infrastructure facilities. The staff should be able to manage the functions of the library, activities of the e-learning system and the resources, under one roof, where trained and qualified staff is essential.

The customer services division of the library should make extra effort to embark on promotional strategies about the resources, programmes and services offered by the library and it is important to organize continuous user education programmes to educate the users on utilization of the services and activities offered by the library.

In the library in an e-learning environment, the quality of the learning environment, physical appearance, acoustic conditions, temperature levels etc are some of the factors to be considered as important, as users are compelled to stay long hours in the library. Frequency of their visits to the library would be more than that of a traditional library situation. The library users should be provided with ample study space with adequate number of computer terminals and trained staff for assistance. It is essential for an E-learning library to have competent technical staff support standby to handle trouble shooting, in order to ensure smooth functioning of the system. The students may engage more in group learning activities where a conducive-environment is preferred. Therefore space and facilities for group learning should be provided.

Conclusion:

e-learning environments are gaining popularity in the academic community, especially in the higher education sector. Universities and colleges are the first to embrace the concept of e-learning in place of traditional teaching /learning methods. Libraries of educational institutions, being the information provider for learning, teaching and research, need to play a key role in the transformation of the education system from traditional to electronic. At the same time, information seeking behaviour of the user population has changed with new expectations. In response to these changes in the learning environment, libraries need re-engineering of library resource management, re-designing of information services and re-orientation of library and information professionals. Therefore a paradigm shift is inevitable in libraries, from library environment to learning resource centre, from collection development to learning content development, from centralised system to distributed and collaborated system, and from librarians to resource/ information providers.

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ඡන් මං, ප්‍රධාන පුස්තකාලය, වුහන් සරසවිය, මහජන විනය රුවන් ගමගේ, තොරතුරු කළමනාකරන පාසල, වුහන් සරසවිය, මහජන විනය යූ ෆෙයි, ඉංජිනේරු පාසල, වුහන් සරසවිය, මහජන විනය

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සාරාංශය

වර්ෂ 1911-1949 කාලය අතරතුර, විනයේ ප්‍රකාශයට පත් වූ පොත් පත් හැඳින්වෙන්නේ වින ජනරජ එකතුව නමිනි, එහි තෝරාගත් කොටසක් අංකිතකරණයට (digitize) බඳුන් කරන ලද ‘වින ඇමරිකා අංකිත අධ්‍යයන-පුස්තකාලය’ විනය පුරා ව්‍යාප්ත, ඉතා විධිමත් සුවිසල් ව්‍යාපෘතියක් වූ අතර ඉන් කොටසක වගකීම හුබෙයි පළාතේ වුහන් සරසවියට ද පැවරිණි. මෙහි සඳහන් වන්නේ එම ක්‍රියාවලිය ක්‍රියාත්මක වූ ආකාරය පිළිබඳ සිද්ධි අධ්‍යයනයකි. විනය මුඛයේ පවතින මෙම ප්‍රකාශන අංකිත කිරීමේ අවශ්‍යතාව, අංකිතකරණ උපායමාර්ගය සහ ඇතැම් අංකිතකරණ ප්‍රමිති පිළිබඳව මෙහිදී සාකච්ඡා කෙරේ. පුස්තකාල එකතුවක් අංකිතකරණයේදී සලකා බැලිය යුතු තාක්ෂණික, පරිපාලනමය සහ විඥාපණ විද්‍යාත්මක කරුණු සම්බන්ධයෙන් ලේඛකයෝ අවධානය යොමු කරති.

මූලික පද: CADAL, වින ජනරජ එකතුව, 1911-1949 එකතුව, අංකිත සංරක්ෂණය

1. හැඳින්වීම

පුස්තකාල එකතු සංරක්ෂණයේ (Collection preservation) එක් ක්‍රමවේදයක් ලෙස අංකිතකරණය ද සැලකිය හැකි ද යන්න පිළිබඳව බොහෝ මත ගැටුම් තිබේ. උදාහරණයක් ලෙස යෝලා ද ලස්නට් [1] පෙන්වා දෙන්නේ වෙනත් සංරක්ෂණ ක්‍රමවේදයන්ට සාපේක්ෂව අංකිතකරණයේ පෙර හා පසු විපදම් ඉතා අධික බැවින්, සංරක්ෂණ අරමුණ සඳහා එය හොඳම විසඳුම නොවන බවයි.

එසේ වුවත්, විශාල දත්ත ප්‍රමාණයක් ගබඩා කිරීම, හැසිරවීම සහ සමුද්ධරණය (retrieval) ඉතාමත් පහසු වීම නිසා, අංකිතකරණය පුස්තකාල සේවාවේ ප්‍රධානතම අංගයක් බවට පත් වෙමින් පවතී.

කටයුතු මෙසේ තිබියදී, වසර 2003-2006 අතර

කාලයේදී විනයේ ක්‍රියාත්මක වූ වින-ඇමරිකා අංකිත අධ්‍යයන-පුස්තකාල ව්‍යාපෘතියේ (CADAL)¹ ප්‍රධාන අරමුණ වූයේ අධ්‍යාපන හා පර්යේෂණ කටයුතු සඳහා ඕනෑම කෙනෙකුට පහසුවෙන් පුස්තකාල සංවිත සඳහා ප්‍රවේශය (access) සැපයීමයි. මේ මගින් වින මාධ්‍ය පොත් 500,000 ක් ද, ඉංග්‍රීසි බසින් පළවූ පොත් එවැනි ම ප්‍රමාණයක් ද අංකිත කෙරිණි.

වින මාධ්‍ය එකතුවට පෞරාණික පොත්පත්වල සිට නවීන පොත්පත් දක්වා විශාල පරාසයක අධ්‍යයන සම්පත් අයත් වෙයි. වින ජනරජ එකතුව, මෙම ව්‍යාපෘතිය හරහා අංකිත මාධ්‍යයට හැරවුණු එක් සම්පතකි. වූහන් සරසවිය මෙම ව්‍යාපෘතියේ එක් ප්‍රධාන හවුල්කරුවකු වූයේ, එහි පුස්තකාලයෙන් තෝරා ගත් වෙළුම් 17,000 ක් පමණ අංකිතකරණයෙන් ඊට දායක වෙමිනි. මෙම ලිපිය ඒ පිළිබඳ සිද්ධි අධ්‍යයනයකි.

2. 1911-1949 වින ජනරජ සාහිත්‍ය එකතුව

සම්මත අර්ථකථනයට අනුව, ක්‍රිස්තු වර්ෂ 1911-1949 කාලය තුළ ප්‍රකාශයට පත් වූ සාහිත්‍ය කෘති සියල්ල අයත් වන්නේ ‘ජනරජ එකතුවට’ යි. මුළුමනින් ම කාලය මුල් කර ගෙන කෙරුණු බෙදීමක් වුවත්, එම කෘතීන් හි අන්තර්ගතය, භෞතික ස්වභාවය වැනි කරුණු අතින් ද එහි සුවිශේෂී ලක්ෂණ හඳුනා ගත හැකිය.

1911 වසරේ දී සිදු වූ වින විප්ලවය මගින් එරට අධිරාජ්‍ය පාලනයට හිත තැබිණි. එතැන් සිට, 1949 වසරේ මහජන වින සමූහාණ්ඩුව බිහි වීම දක්වා කාලය හැඳින්වෙන්නේ වින ජනරජ සමය ලෙසයි. වින බසින් එය මින් ගුවෝ (Min Guo) ලෙස හැඳින්වේ. වසර 38 ක් වූ මෙම කාලය අතිශයින් චැඳගත් වන්නේ, එය පැරණි විනය සහ නව විනය අතර සංක්‍රාන්ති සමය වූ බැවිණි, මේ කාලය තුළ විනයට විදේශීය බලපෑම් අධික විය. එහෙයින් ම, මෙසමයේ විනයන් සෙසු ලෝකයන් අතර සිදු වූ සංස්කෘතික හුවමාරුවද සැලකිය යුතු ලෙස ඉහළ ගියේය. මේ හේතුවෙන් පැරණි හා නව මතවාද අතර ඝට්ඨනයක් ඇති වූ බව කියැවේ. එය වැඳගත් සංවාදයන්ටද, බොහෝ රචනාවන්ට ද මහ හෙළිකර ඇත.

සාහිත්‍ය ප්‍රකාශන ඔරුතු පිටින් එළි දැක්වීමට රුකුල් දුන් තවත් හේතුවක් වූයේ, මේ වින විට මුද්‍රණ තාක්ෂණයද ඉහළ මට්ටමක පැවතීමයි. එහෙයින් මුද්‍රණාල හා ප්‍රකාශන ආයතන සංඛ්‍යාවද සැලකිය යුතු ලෙස ඉහළ ගියේය. පුස්තකාල හා ලේඛනාගාර වැනි සංරක්ෂණ ආයතනද ඒ හා සමානව වර්ධනය විය. මේ අනුව ඇතැම් පොත්වල පිටපත් ලක්ෂයක් පමණ මුද්‍රණය වී යැයි වාර්තා වී ඇත[2]. මීට අමතරව වාර සඟරා, සඟරා, පුවත්පත්, සහ පුස්තිකා (pamphlet) ද විශාල වශයෙන් ප්‍රකාශයට පත් විය.

මෙහෙයින් බලන කල වින ජනරජ එකතුව (මෙතැන් සිට ජනරජ එකතුව ලෙස හැඳින්වේ) වැඳගත් වන්නේ ඓතිහාසික හා සාහිත්‍යමය අගය නිසා පමණක් නොවේ; කඩදාසි නිෂ්පාදනය, මුද්‍රණ යන්ත්‍ර, පොත් බැඳීම, පුස්තකාල කළමනාකරණය, හා සංරක්ෂණය වැනි ක්ෂේත්‍රවල සිදු වූ තාක්ෂණික දියුණුව ද හේතුවෙනි [3].

3. භෞතික ජනරජ එකතුවේ වත්මන් තත්වය විශ්ලේෂණය

3.1 ව්‍යාප්තිය

භෞතික ජනරජ එකතුව වින මහා දේශය පුරා බොහෝ ව්‍යාප්ත වී තිබේ. අදාළ කාලය තුළ ප්‍රකාශයට පත් වූ පොත් පත් රැසක් පුස්තකාල, ලේඛනාගාර, පර්යේෂණ මධ්‍යස්ථාන විශාල ගණනක ගබඩා කොට ඇත. වින ජාතික-පුස්තකාලය, පළාත් මහජන පුස්තකාල, බෙයිපීං, නන්ඩිං, ෆුදාන් , වූහන් ඇතුළු බොහෝ සරසවි ආදිය සුවිසල් ජනරජ එකතුව පවත්වාගෙන යයි. ප්‍රධාන ප්‍රවාහයට අමතරව, ජනරජ සමය තුළ මේ සරසවි වලින් උපාධි ලැබූ ශිෂ්‍යයන් ගේ උපාධි නිබන්ධන වැනි නොවිධිමත් ප්‍රකාශන රැසක් ද ඒ අතර වේ. ඒවා බොහෝ විට අතින් ලියැවී තිබේ. මේ අනුව භෞතික ජනරජ ප්‍රකාශන සියල්ල එක් ගොණුවක් සේ සැලකුවහොත් එය විනයේ දෙවැනි විශාලතම ලේඛනාගාරය වනු ඇත.[3].

3.2 දිරාපත් වීමේ ප්‍රවණතාව

මෙම එකතුවේ බොහෝ ප්‍රකාශන අධික ලෙස දිරාපත් වී තිබේ. ඒවා හංගුර ය. අතින් ඇල්ලූ පමණින් කැඩේ. උදාහරණ ලෙස , වින ජාතික පුස්තකාලයේ ඇති පොත් පත් 670,000 ක ජනරජ එකතුවෙන් 90% ටම ඛරපතල ලෙස හානි සිදුවී තිබේ. මේ අතර, මුල්ම යුගයේ ප්‍රකාශනවලට සිදුවූ හානිය 100%කි[4]. ජිලින් සරසවියේ 160,000 ක එකතුවෙන් 90% ක් ද [5], කේටිං සරසවියේ වෙළුම් 170,000 කින් අඩක් පමණ ද [6] මෙසේ විනාශ වී තිබේ. නන්ඩිං සරසවියේ ඇති 700,000 ක එකතුවේ 60% ක් ම ‘වියපත්’ මට්ටමේ පවතී. [7]. චුහන් සරසවියේ වෙළුම් 50,000 සුන්ඬුන් විමට ආසන්න තත්ත්වයේ පවතී [8].



රූපය 1. පොත්පත් බොහොමයක් ඇත්තේ ඉතා අවදානම් මට්ටමකයි.

3.3 පරිහරණ ස්වභාවය

එකතුවේ ඇති එක් එක් පොතේ වත්මන් ස්වභාවය අනුව, ප්‍රවේශය සංවෘත (closed access) හෝ විවෘත (open access) විය හැකිය. කෙසේ නමුත්, විශේෂයෙන් වින ඉතිහාසය හදාරණ විද්‍යාර්ථීන් අතර මෙය ඉතා ජනප්‍රිය එකතුවකි. මෙහිදී මතුවන ගැටළු වන්නේ ඇතැම් පොත් පත් කියැවීමට බොහෝ දුර ගෙවා පැමිණීමට සිදු වීමත්, ඒ ඒ ආයතනවල සම්පත් පරිහරණය සඳහා වෙන් වෙන් වශයෙන් අවසර ලබා ගැනීමට සිදුවීමත්ය. විශේෂයෙන් විනයේ ඉගැන්වීමේ විශාලත්වය සැලකූ විට, මේවා ඉතා බැරැරැම් කරුණු වේ.

4. භෞතික ජනරජ එකතුවේ විශේෂ ලක්ෂණ

4.1 කඩදාසිය

අංකිතකරණයේදී පැරණි කෘති විනාශ වන්නට ඉඩ හැරීමක් සිදු නොවේ. එහෙයින් සංරක්ෂණ අවශ්‍යතාවය ද මෙහිදී ප්‍රබලය. අංකිතකරණයට පෙර, එම සංවිතයේ භෞත-රසායනික තත්ත්වය තක්සේරු කිරීම වැදගත් වන්නේ ද එබැවිනි.

ඉහත කාලාන්තරයට අයත් කෘති මුද්‍රණයේ දී පැරණි තාක්ෂණය මෙන්ම නව තාක්ෂණයද සමසමව භාවිත කර ඇති බව පෙනේ. උදාහරණ ලෙස පැරණි ශුවන්² කඩදාසි පමණක් නොව, එකල සාපේක්ෂව නව නිර්මාණයක් වූ අම්ල කඩදාසි³ ද භාවිත වී තිබේ. එසේ ම, අත් අකුරින් ලියැවී මුද්‍රිත පොත් මෙන්ම අවිච්ඡිද්‍ර අකුරින් මුද්‍රිත පොත්පත් ද ඇත. මෙම පොත්වල බැම් අතර, අතින් කෙරුණු නුල් බැඳුම් මෙන්ම යාන්ත්‍රික බැඳුම් ද ඇත.

විනයේ ඕනෑම පුස්තකාලයක ඇති ‘ජනරජ’ පොත්වල වර්තමාන ස්වභාවය, සංරක්ෂණ ප්‍රමිතීන්ට අදාලව ‘අනතුරුදායක’ මට්ටමක පවතී ඒවා හංගුර මෙන් ම දැඩි ස්වභාවයෙන් යුතු අතර, අව පැහැ ගැන්වී තිබේ.

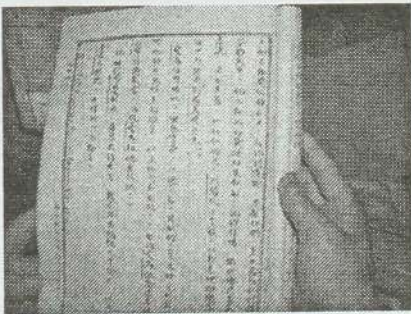
චුහන් සරසවි පුස්තකාලයේ ජනරජ එකතුවෙන් අඩක් පමණ පොත් පත් තරමක් දුරට හෝ ඉරි ඇත. මෙම පුස්තකාලයේ ඇති අතිශය පෞරාණික එකතු හා සසඳන විට

මෙම එකතුව වඩාත් අවදානම් තත්ත්වයක පැවතීණි. මෙම වෙනසට හේතුව වූයේ එම පොත් පත් මුද්‍රිත කඩදාසියේ ආම්ලිකතාව අධික වීමයි.⁴ උදාහරණ ලෙස සුං හා යුවන් රාජසංඝයන් හි පළවූ ඇතැම් ප්‍රකාශන වසර දහසකට වඩා පැරණි වුවත්, අදත් පහසුවෙන් කියවීමට හැකිය. එහෙත් මෙම ජනරජ එකතුවේ පොත් සහ පුවත්පත්වල ආයු කාලය පිළිවෙලින් වසර 100-200 සහ 50-100 අතර බව කියැවේ[4]. එම නිගමනයට අනුව මේ එකතුවේ පුවත්පත් ස්වභාවික මරණයේ එළිපත්තේ සිටී. පොත් පත්ද සිටින්නේ වයස්ගත අවධියකයි. මෙසේ හෙයින් මෙම සංවිනය අංකිතකරණයේදී සිදු විය හැකි හානිය අවම කර ගැනීම සඳහා උපරිම වෙහෙසක් ගන්නා ලදී. එසේ කළද, අංකිතකරණය අවසානයේ 70% ක පමණ සම්පත් ප්‍රමාණයක් නැවත සකස් කර සංරක්ෂණය කිරීමට සිදු විය. මන්ද, ඒවා ඉතාම හංගුර තත්ත්වයේ පැවති බැවිණි.

4.2 ප්‍රකාශනය

ජනරජ එකතුවේ පොත් පත් එළිදැක්වී ඇත්තේ පිළිගත් ප්‍රකාශන සමාගම් මගින් පමණක් නොවේ. රජය, පෞද්ගලික සමාගම්, හෝ දේශපාලන පක්ෂ වැනි පුළුල් පරාසයක ආයතන රැසක්ද ග්‍රන්ථ ප්‍රකාශනයේ යෙදී සිටියේය. එකතුවේ වැඩිම ප්‍රතිශතයක් ඇත්තේ දෙවනුව දැක්වූ නොවිධිමත් ප්‍රකාශකයන් ගේ ප්‍රකාශනයයි. එසේම මුද්‍රිත පොත් පත්, උන් මුද්‍රණ⁵ (off print) මෙන්ම අත් අකුරු මුද්‍රණද⁶ ජනරජ එකතුවේ දක්නට ලැබේ.

ප්‍රකාශනයේ දෙවැනි ලක්ෂණය වන්නේ විවිධ මුද්‍රණ තාක්ෂණ භාවිත වී තිබීමයි. අනුපිටපත් (mimeo graph) සංස්කරණ, අවිච්ඡි අකුරු සංස්කරණ (letter press), අත් අකුරු සංස්කරණ, ලි අවිච්ඡි සංස්කරණ, ලිතෝ මුද්‍රණ, සහ ඔර්මෝලු (රන් පැ අකුරු) සංස්කරණ වශයෙන් අතිශය විවිධත්වයක් මේවායේ තිබේ. ජනරජ යුගයේ මුල් අවධියේ මෙම විවිධත්වය දැකිය හැකි වුවත්, පසු කාලයේ වැඩි ප්‍රතිශතයක් දක්නට ලැබෙන්නේ අවිච්ඡි අකුරින් මුද්‍රිත ප්‍රකාශනයයි.



රූපය 2. අතින් ලියන ලද උපාධි නිබන්ධනයක් (දකුණේ සිට වම්, සිරස්ව ලිවීම පැරණි වින ලේඛන සම්ප්‍රදායයි)

4.3 පොත් බැම්ම

විනයේ පෞරාණික ලිපි ලේඛන බැඳ ඇත්තේ අත් මැස්මෙනි. එහෙයින් ජනරජ එකතුවේ මුල් කෘතිවල මෙම බැඳුම් ක්‍රමය දක්නට ඇත. පසුව තාක්ෂණික දියුණුවේ බලපෑමෙන් යාන්ත්‍රික බැඳුම් බහුල වී තිබේ. කෙසේ වෙතත් ඒ සඳහා භාවිත වූ අමුද්‍රව්‍ය, එතරම් හොඳ තත්ත්වයේ නොපැවතිණි. එනිසා මෙම එකතුවේ කඩදාසි පහසුවෙන් ගැලවී යන බව අපගේ අත්දැකීමයි. වූහන් සරසවියේ ජනරජ එකතුව අංකිතකරණ ක්‍රියාවලියේ දී මුළු එකතුවෙන් සියයට 20 ක පිටු මෙලෙස විසිර ගියේය. වෙළුම් 6 ක් “ඇල්ලු පමණින් කැඩී ගොස්” ඇත්තේ නැවත සකස් කළ නොහැකි අයුරිනි.

4.4 අත්තර්ගතය

ජනරජ යුගය අතිශය ගැටුම්කාරී මතවාදී වලට මුහුණ පෑ බව අපි කලින් ද සඳහන් කළෙමු. මේ තත්ත්වය ධනාත්මක ලෙස නව නිර්මාණවලට ද මුල් විය. මෙය වසන්ත හා

සිසිර සහ ප්‍රතිරෝධී රාජ්‍ය යුගයන්ට පසු⁷ වැඩිම සංස්කෘතික ප්‍රබෝධයක් ඇතිවූ කාලය බව කියැවේ. එහෙයින්ම විවිධ අදහස් රැගත් නිර්මාණ ද බිහි විය. උදාහරණය ලෙස ඇතැම් ලේඛන වැඩවසම් ක්‍රමය පවත්වා ගැනීමට පක්ෂවද, ඇතැම් ලේඛන ප්‍රජාතන්ත්‍රවාදය පවත්වාගැනීමට පක්ෂවද අදහස් දැක්වීය. ඇතැම් නිර්මාණ නව සංස්කෘතියටත්, තවත් ඒවා පැරණි සංස්කෘතියටත් පක්ෂව පළ කෙරිණි.

මේ යුගයේ ප්‍රධානතම වින්තන ගුරුකුල වූයේ ලු ශන් ගේ නව සංස්කෘතික ව්‍යාපාරය, සුන් යන්-සෙන් ගේ නව ප්‍රජාතන්ත්‍රවාදය සහ මාවෝ zසතුං වැනි විප්ලවීය නායකයන්ගේ කොමියුනිස්ට් වාදයයි. මේවා විනය පුරා වේගයෙන් පැතිර ගිය අතර, ඒ පිළිබඳව ජනතාව දැනුවත් කිරීමට පොත් පත් මහත් සේ ඉවහල් විය. මීට අමතරව වින ජනරජයේ දේශපාලන දර්ශනය, විද්‍යාව හා තාක්ෂණය, මෙන්ම බටහිර සංස්කෘතිය හරහා ජනනය වූ අදහස් සහිත ප්‍රකාශන ද සැලකිය යුතු ප්‍රමාණයක් ජනරජ එකතුවේ තිබේ.

මේ අනුව, යුගයේ දේශපාලන, සංස්කෘතික, විද්‍යා-තාක්ෂණ, හා සමාජ විද්‍යාත්මක ආදී පැතිකඩ රැසක් පිළිබඳව ජනරජ එකතුව මගින් හෙළි වන බව පහසුවෙන් නිගමනය කළ හැකිය.

5. අංකිතකරණය

ජනරජ එකතුව අංකිතකරණය මගින් සංරක්ෂණය හා ප්‍රවේශ අවශ්‍යතාවලට විසඳුමක් ලැබෙන බව පුස්තකාලයේ බලාපොරොත්තුවයි. කෙසේ නමුත් එය තහවුරු කළ යුතු විය. ඊට අමතරව පිළිතුරු සෙවිය යුතු තවත් වැදගත් ප්‍රශ්න කිහිපයක් තිබිණ. එනම්, අදාළ සංවිනය කෙසේ අංකිත කළ යුතුද, එහිදී අනුගමනය කළ යුතු ප්‍රමිතීන් මොනවාද, තත්ත්ව පාලනය කරන්නේ කෙසේ ද යන සාධකයි. මෙම සංවිනය අකිතකරණ ව්‍යාපෘතියේදී, වුහන් සරසවි පුස්තකාලය මගින් ඉහත සඳහන් ගැටළු විසඳීම සඳහා ක්‍රියා මාර්ග සැලසුම් කළේය.

5.1 අංකිතකරණයේ අවශ්‍යතාවය නිමායනය (Estimation)

5.1.1 ඉල්ලුම

මෙහිදී අංකිතකරණ ඉල්ලුම දෙආකාරයකින් අර්ථකථනය කළ හැකිය. පළමුවෙන්, ‘සංරක්ෂණය සඳහා අංකිතකරණය’ නමැති වුවමනාව තිබේ. දෙවනුව එහි පරිහරණ අවශ්‍යතාවය පාදකයන්ට ඇත. උදාහරණ ලෙස වුහන් සරසවි පුස්තකාලයේ භෞතික ජනරජ එකතුවෙන්, පොදු පාඨක පරිශීලනය සඳහා යෙදවිය හැක්කේ වෙළුම් 30,000 ක් එනම් සියයට 85 ක් පමණි. සරසවියේ ශිෂ්‍ය සංඛ්‍යාව 75,000 ඉක්මවයි. ආචාර්ය මණ්ඩලය, 3,400 කි. මීට අමතරව සාහිත්‍යය, ඉතිහාසය සහ දර්ශනය, වුහන් සරසවියේ ප්‍රධානතම විෂය ක්ෂේත්‍ර කිහිපය අතර දැක්වෙන බවත්, එම ශිෂ්‍යයින් ජනරජ එකතුව කෙරෙහි වඩාත් සංවේදී වන බවත් සැලකිය යුතුය. එබැවින් මෙම පුස්තකාලයේ ජනරජ එකතුවේ පාඨක පිරිස ඉතා අධික වේ.

එසේම, ප්‍රධාන පුස්තකාලයට අමතරව අධ්‍යයන අංශ පුස්තකාලවලද මෙම එකතුවට අයත් පොත් පත් විසිරී තිබීම, සංරක්ෂණයේදී සහ ප්‍රවේශය සැලසීමේ දී මතු වන ගැටළුවකි. අංකිතකරණය එවැනි ගැටළුවලට පහසුවෙන් විසඳුම් ලබා දෙයි. අංකිත එකතුවකට ‘සරසවි පරිගණක ජාලයේ, ඕනෑම අන්තයකින් ප්‍රවේශ විය හැකි බැවිනි.

මෙම ව්‍යාපෘතිය CADAL නමැති ජ්‍යාතන්තර ව්‍යාපෘතියේ කොටසක් වීම නිසා, ලොව කොතැනක හෝ සිටින ඕනෑම කෙනෙකුට එම පොත් මාර්ගගතව (online) පරිශීලනයට ඉඩ සැලසේ.

5.1.2 එකතු සංවර්ධන ප්‍රතිපත්තිය (collection development policy)

වුහන් සරසවියේ එකතු සංවර්ධන ප්‍රතිපත්තියට අනුව එකතුව වැඩි දියුණු කිරීමේදී ප්‍රධාන වශයෙන් සලකා බැලෙන්නේ එහි භාවිතයයි. අංකිතකරණය සම්බන්ධයෙන් තව දුරටත් වැදගත් වන සාධකය නම්, එමගින් නව සේවාවන් ලබා දිය හැකිවීමයි. උදාහරණ වශයෙන්, පාඨකයා පුස්තකාලයෙන් බැහැර සිටියදී ද, එකතුවේ පොතක මුළු පෙළ (full text) පරිහරණය කළ හැකි නම්, සහ මාර්ගගත සෙවුමක් මගින් අවශ්‍ය තොරතුරු පෙළ ගස්වා ගත හැකි නම්, ඒවා නව සේවාවන් වේ. එනමින් බලන කලද අංකිතකරණය මගින් ජනරජ එකතුවට මෙන්ම පාඨකයන්ටද වඩාත් සාධාරණයක් ඉටු වේ.

5.2 සම්පත් තෝරාගැනීමේ සම්මතය

කලින් දැක්වූ පරිදි වුහන් සරසවියේ ජනරජ එකතුව සංවර්ධනයේ එකම නිර්ණායකය වන්නේ පොත්පත්වල ප්‍රකාශන වර්ෂයයි. අංකිතකරණය සඳහා ද මෙම වර්ග කිරීම එසේම යොදා ගන්නා ලදී. ඒ අනුව වුහන් සරසවියට අයත් ඕනෑම පුස්තකාලයක, පාසලක, දෙපාර්තමේන්තුවක ඇති, ක්‍රිස්තු වර්ෂ 1911 සහ 1949 අතර ප්‍රකාශයට පත් වූ සියලු පොත් පත් මෙම එකතුවට අයත් වේ. එනම්, සාම්ප්‍රදායික නුල් බැමීම සහිත පොත් මෙන්ම, කඩදාසි බැමීම සහිත පොත් ද මේ අතර ඇත. සිරස් වැකි ඇති පොත් මෙන්ම (දෙවැනි රූපය බලන්න), තිරස් වැකි සහිත පොත් ද එහි තිබේ. එසේම, පැරණි බසින් ලියැවුණු පොත් මෙන්ම නවීන බසින් ලියැවුණු පොත් ද අංකිතකරණය සඳහා අයත් වෙයි.

5.3 අංකිතකරණ ප්‍රමිති

ජනරජ එකතුව අංකිත කළ පසු, ඕනෑම භාලගත පරිගණකයකින් අන්තර්ජාලය හරහා පහසුවෙන් ඊට ප්‍රවේශ විය හැකි විය යුතුය. ඒ සඳහා විවිධ අංකිතකරණ සම්මත භාවිත කිරීමට සිදුවිය. මුලිකව මේවා තිරණය කෙරුණේ CADAL ව්‍යාපෘතිය මගිනි.

මෙහිදී බහුලව භාවිත වූයේ විවෘත ඉලෙක්ට්‍රොනික පොත් ප්‍රමිතීන්ය. (open electronic book standards). ඒ අනුව අංකිත ලේඛනයක පරිලෝකන විභේදනය (scanning resolutions) 600dpi⁸ ලෙස තිරණය විය. පිටු නිර්මාණයේදී XML සම්මතය යොදා ගන්නා ලදී. රූපමය ලිපි ගොණු, TIFF හා DjVu ආකෘතිවලින් සුරැකුම් (save) කර තිබේ. මේවා පැරණි ප්‍රමිතීන්ගෙන් බොහෝ දුරට වෙනස්ය. උදාහරණයක් ලෙස, කලින් තිබූ අංකිත ලේඛන කියවීම සඳහා වෙනම මෘදුකාංග ඒ ඒ අවස්ථාවේදී බාගත කළ යුතුය. එහෙත් වත්මන් සම්මතය යටතේ එවැනි විශේෂ මෘදුකාංගවල පිහිට අවශ්‍ය නොවේ.

මෙම අංකිතකරණයේදී පාර-දත්ත (metadata) සඳහා ද ලෝකයේ බොහෝ අංකිතකරණ ව්‍යාපෘතිවල යොදා ගන්නා ඩබ්ලිව් සම්මතයට (DC⁹) ආසන්න ප්‍රමිතියක් භාවිත කරන ලදී. CADAL ව්‍යාපෘතියේ තාක්ෂණික ප්‍රතිපත්තිවලට අනුකූලව, ජනරජ එකතුවේ විශේෂ ගති ලක්ෂණ හා පැහැන පරිදි වුහන් සරසවිය සඳහා අදාල සම්මතය සකස් කෙරිණ. උදාහරණ වශයෙන්, කිසියම් පොතක් සඳහා ඇතැම් පාර-දත්ත ඇතුලත් කිරීම අත්‍යවශ්‍ය විය (අනිවාර්යය බව - උදා: ග්‍රන්ථ නාමය). ඇතැම් පාර-දත්තයක් එක් වරකට වඩා ඇතුලත් කිරීමට ඉඩ පහසුකම් අවශ්‍ය විය (පුනරාවර්තතාව - උදා: කර්තෘ). තවත් විටෙක ග්‍රන්ථ නාමය ඇතුලත් කිරීමේ දී වර්ගීකෘත (classified) හා වඩා විස්තරාත්මක විය යුතු විය. උදා: බැඳී වෙළුම්, ග්‍රන්ථ මාලා, සෙසු භාෂා යනාදිය සඳහා). මීට අමතරව කාල අවකාශ දැක්වීම සඳහා ද, විරාම ලකුණු යෙදීම් සඳහා ද තවදුරටත් නියමයන් සම්මත කර ගන්නා ලදී.

5.4 අංකිතකරණය කළමනාකරණය සහ තත්ත්ව පාලනය

අංකිතකරණ කටයුතු අංශ දෙකක් ඔස්සේ නිම කරන ලදී.

1. පරිලෝකනය (scanning) සහ පාර-දත්ත ආදානය කිරීම (input)
2. තත්ත්ව පාලනය සහ වර්ගීකරණය.

මෙහි දී, මුලින් ම සැලකිල්ලට ගැනුණේ එක් එක් කටයුත්තට වඩාත් විශේෂඥ වූ අංශය වෙත ඒ ඒ කටයුත්ත පැවරීම යි. එසේම, පුස්තකාලයේ සම්පත්වල සීමාවන් සහ කළමනාකරණ කාර්යක්ෂමතාව ද මෙහි දී සලකා බැලිණි. ඒ අනුව පරිලෝකනය සහ පාර-දත්ත ඇතුළත් කිරීම සිදු කෙරුණේ ඒ සඳහා විශේෂඥ පොද්ගලික ආයතනයක් මගිනි. තත්ත්ව පාලනය සහ වර්ගීකරණය, පුස්තකාල කාර්ය මණ්ඩලය මගින් නිම කරන ලදී.

5.4.1 පරිලෝකනය

පරිලෝකනය සරසවියෙන් පිටත සමාගමකට භාර දුන් බව පෙර කීවෙමු. එය වගකීමෙන් කළ යුතු කටයුත්තකි. එහෙයින් එම සමාගම මගින් ගුරු කොට ගත යුතු “අංකිත-පිරිසකසුම් ප්‍රමිතියක්” (digital processing standard) පුස්තකාලය මගින් සකස් කරන ලදී. පරිලෝකන තත්ත්ව (precision), සම්පූර්ණඛව (entirety) මෙන් ම පිරිසිදුකම (decontamination) සම්බන්ධයෙන් තිබිය යුතු ප්‍රමිති මෙහි පැහැදිලිව දක්වා තිබේ. එය පුස්තකාලය සහ සමාගම අතර අත්සන් කෙරුණු නීතිමය ලියවිල්ලක් මගින් තහවුරු කෙරිණි.

සමාගමට අදාළ කටයුතු නිම වූ පසු පුස්තකාලයේ අදාළ නිලධාරීන් අතින් එය නැවත පරීක්ෂාවට ලක් විය. නියමිත ප්‍රමිතියට නොවූ පිටු නැවත පිරිසකසන ලදී. අවසානයේ දී අංකිත ජනරජ එකතුව පරිගණක තිරය මත ඉතා පැහැදිලිව හා පිරිසිදුව දිස් වීමට ඉහත සඳහන් දැඩි ක්‍රියාමාර්ග බෙහෙවින් උපකාරී විය. එය ඇතැම් විට මුල් පිටපතටද වඩා පැහැදිලි බවින් යුතුය.

5.4.2 මෙටා දත්ත ඇදීම

නිවැරදි තොරතුරු සමුද්ධරණය කෙරෙහි පාර-දත්ත කෙළින්ම බලපායි. එනිසා පාර-දත්ත ඇදීම කෙරෙහි බලවත් සැලකිල්ලක් දැකිවිය යුතුය. එහෙයින් CADAL ප්‍රමිතියේ ඇතුළත් ඇතැම් සම්මත තරමක් වෙනස් කෙරිණ. උදාහරණ ලෙස, එක් එක් අයිතමය සඳහා මුල පද (keywords) අනිවාර්යයෙන් ඇතුළු කළ යුතු විය. අවම මුල පද ගණන 03කි.

පාර-දත්ත ඇතුළත් කිරීම ද සිදු කෙරුණේ අදාළ සමාගම මගිනි. මුලින් ම ඔවුහු ප්‍රධාන මුල පද ඇතුළත් කළහ. දෙවනුව පුස්තකාලයේ සුවිකරණ අංශය මගින් ඒවා සෝදිසි කර වැඩිමහත් පද ඇතුළත් කරන ලදී. “පාර-දත්ත පරීක්ෂණ නිර්ණායක” නම් වූ නීතිමය ලියවිල්ලකින් අදාළ සමාගමේ කටයුතුවල තත්ත්ව ඉහළ නැංවීම සිදු විය. එහි ඇතුළත් වූයේ තාක්ෂණික කරුණු පමණක් නොවේ. එම ආයතනය මගින් අදාළ කටයුත්තේ දී සිදු වූ වැරදි ප්‍රමාණය මත පදනම් වූ, ගාස්තු අඩු කිරීමේ සූත්‍රයක් ද ඊට එක් කෙරිණි. මෙම සූත්‍රයට අනුව එක් අයිතමයක විවිධ ක්ෂේත්‍ර (fields) ආදානය සඳහා විවිධ මිල වටිනාකම් තිබේ. වැරදුණු සෑම ක්ෂේත්‍රයක් සඳහා ම අදාළ මිල අගයන්හි එකතුව කලින් තීරණය කරන ලද අගයකට වඩා වැඩි වූ විට, සමාගමේ පිරිසකසුම් ගාස්තුවෙන් එක් ප්‍රතිශතයක් අඩු වෙයි. මේ ද්විත්ව පරීක්ෂා සම්මතය බෙහෙවින් සාර්ථක විය එනිසා වූහත් සරසවියේ ජනරජ එකතුවේ මෙටා දත්තවල ගුණාත්මක බව ඉතා අධික ය.

6. නිගමනය

අංකිතකරණ ක්‍රියාවලිය, සුක්ෂ්ම පත්‍රිකා (microfiche) සහ ප්‍රතිරූප (facsimile) වැනි සාම්ප්‍රදායික සංරක්ෂණ ක්‍රමවේදයන්ට වඩා විශදම් අධිකය. එහෙත් භාවිතය ඉහළ නැංවීම, පහසු ප්‍රවේශය, සහ නව සේවා සැපයීම වැනි කරුණු සලකන විට එය අත්‍යවශ්‍ය පුස්තකාල ක්‍රියාවලියක් බවට පත් ව තිබේ.

වූහන් සරසවි පුස්තකාලය මගින් ජනරජ එකතුවට කළ පිරිසම, දෙආකාරයකින් වැදගත් වේ. පළමුවැන්න නම්, එමගින් නව අංකිතකරණ කළමනාකරණ විධි හඳුන්වා දීමයි. පරිලෝකනය සහ පාර-දත්ත අදානය බාහිර සමාගම්වලට පැවරීමේ හොඳ මෙන්ම නරක ප්‍රවීච්ච ද ඇත. කෙසේ නමුත් මෙම පුස්තකාලයේ කාර්ය මණ්ඩලය දැනට සිදු කෙරෙන පරිපාලන කටයුතු සඳහා උපරිම ව යොදා ගැනීමට ඇති බැවින්, පරිලෝකනය වැනි කටයුත්තක් සඳහා සේවකයන් යෙදවීමේ හැකියාවක් නැත. අනෙක් අතට ඒ සඳහා තාවකාලික පදනම මත හෝ සේවකයන් බඳවා ගැනීම ද ප්‍රායෝගික ව අපහසුය. ඒ වෙනුවෙන් පරිපාලන සීමා තවදුරටත් පුළුල් කිරීම අවශ්‍ය බැවිණි. එසේ නොවුණද, අළුතින් සේවකයින් බඳවා ගැනීමට වඩා, පිටත සමාගමකින් එම කටයුත්ත ම කර ගැනීම ලාභදායී විය. එහිදී විය හැකි අඩු පාඩු මග හැරීම සඳහා පනවා ඇති ගාස්තු අඩු කිරීමේ ක්‍රමය ඉතා ඵලදායී වේ.

දෙවනුව, හංගුරු සම්පත් එකතුවක් අංකිතකරණයේ ප්‍රායෝගික උදාහරණයක් මගින් සැපයීම වැදගත් කරුණකි. සුවිශේෂ භෞතික ලක්ෂණ නිසා අන්තරාදායී මට්ටමක පැවැති ග්‍රන්ථ එකතුවක්, අංකිතකරණයේදී යම් තරමකින් හෝ තව දුරටත් ව්‍යාපනයට පත්වීම නොවැලැක්විය හැකිය. එසේ හෙයින් ඒවා නැවත පිරිසැකසුම් කිරීම අත්‍යවශ්‍ය වේ. වූහන් සරසවියේ ජනරජ එකතුව සඳහා එම සාධාරණය ඉටුව තිබේ.

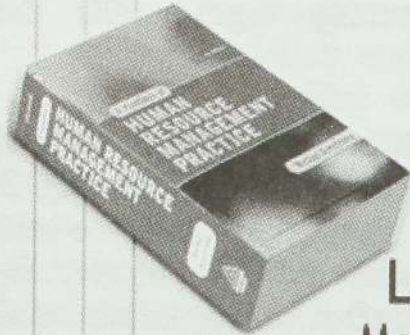
අංකිතකරණයේ දී දත්ත ඉදිරිපත් කිරීම සඳහා විවෘත සම්මතයන් භාවිතා කිරීම නිසා දත්ත හුවමාරුවේ සඵලතාවය සහ තත්ත්වය ඉහළ යනු ඇත. විශේෂයෙන් මෙම එකතුවට අන්තර්ජාලය හරහා ප්‍රවේශ විය හැකි අතර, තොරතුරු කියවීම සඳහා විශේෂ වූ අමතර මෘදුකාංග බාගත කර ගැනීම අවශ්‍ය නොවේ. එය භාවිත කරන්නාගේ කාර්යය පහසු කරයි.

පුස්තකාල සම්පත් අංකිතකරණයේදී සම්පත් සංවර්ධන ප්‍රතිපත්ති සකස් විය යුත්තේ කෙසේද, අංකිතකරණ ව්‍යාපෘතියක කාර්ය ගලනය කෙසේ විය යුතු ද අදාල පරිලෝකනය වැනි තාක්ෂණික කටයුතු වල තත්ත්වය පවත්වා ගන්නේ කෙසේද යන පර්යේෂණ ගැටළු සඳහා මෙම ව්‍යාපෘතිය මගින් කිසියම් ආලෝකයක් ලබා දුන් බව අපි විශ්වාස කරමු.

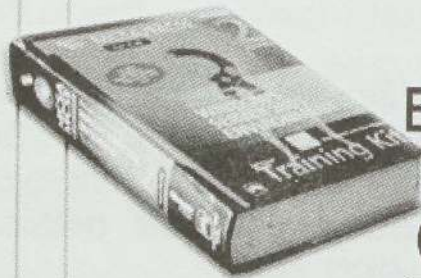
ශ්‍රී ලංකාවේ ජාතික පුස්තකාලය, ජාතික ලේඛනාගාරය, ජාතික කෞතුකාගාර පුස්තකාලය වැනි දැනුම් සම්පත් සංරක්ෂණාගාරවල පොත්පත් සංවිත අංකිතකරණය සඳහා ද මෙවැනිම ක්‍රියාමාර්ගයක් අනුගමනය කිරීමේ හැකියාව ඇත. එම ආයතනවල ද සංවෘත ප්‍රවේශ ක්‍රමවේදය දැනට භාවිතවේ. ග්‍රන්ථ එකතුවට භෞතික හානි ගෙන දීම යම් තරමකින් හෝ වැලැක්වීම එහි අරමුණයි. අදාළ සංවිත අංකිතකරණය මගින් භෞතික හානි ඇති වීමෙන් තොරව ඒවා පරිශීලනයට විද්‍යාර්ථීන්ට අවකාශ සැලසේ. එසේම වඩා පහසුවෙන්, නොවිධිමත් ව සහ බාහිරව රැඳෙමින් වුවද සංවිත පරිශීලනයට පාඨකයාට අවස්ථාව තිබේ. විශේෂයෙන්, ඉහත සඳහන් ආයතන වලින්, විභාගස්ථාන හා පොදුගලික සංවිත ආදියෙන් ඇති පැරණි පුස්තකාල පොත් අංකිතකරණය, ඉතා ප්‍රයෝජනවත් විය හැකිය.

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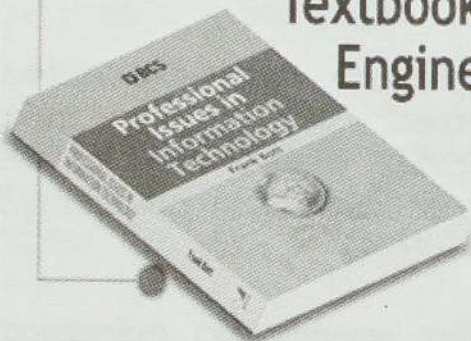
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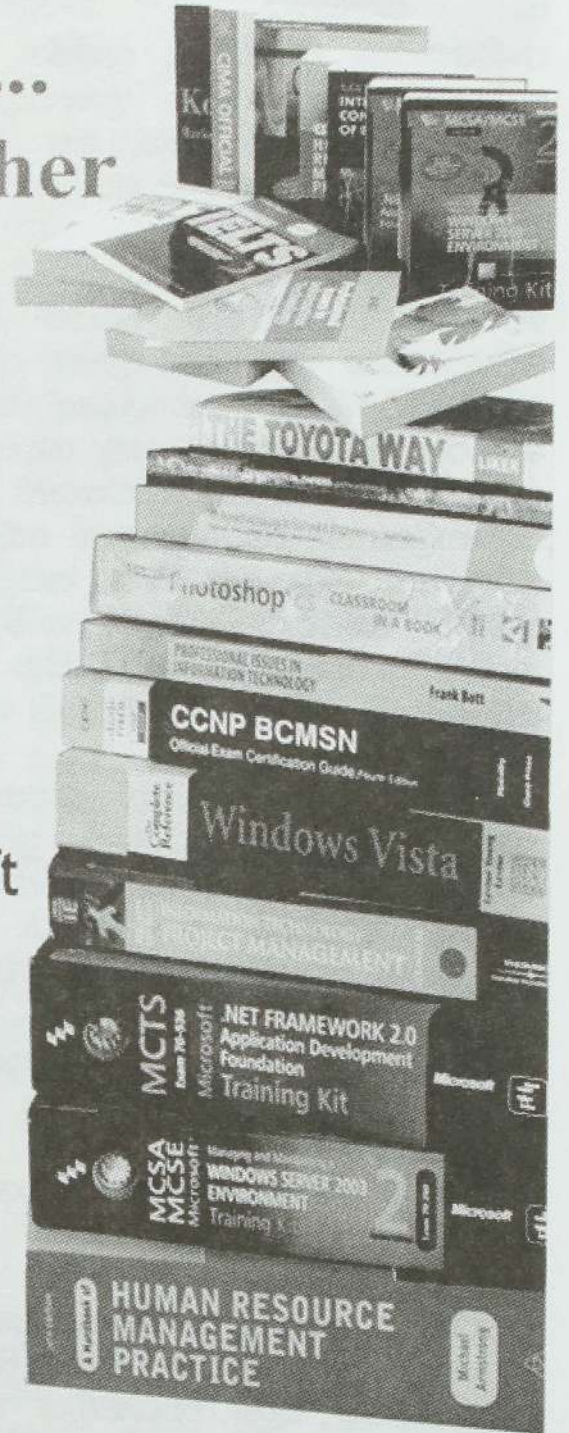
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செயற்பாடுகளும்**

T. Sritharan,
Librarian – Head, Bibliographic Services Division
National Library and Documentation Centre

**Thayananthy
Sritharan**

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Abstract : ஆவணவாக்கம் என்பது நூலகங்களில் நடைபெறும் முக்கிய செயற்பாடுகளில் ஒன்றாகும் : சகல துறை சார்ந்த ஆவணங்களையும் ஒன்று சேர்த்து, ஒழுங்குபடுத்தி, சேவைக்கு விடுவதன் மூலம் வாசகர்கள், நூலகர்கள், ஆகிய எல்லோருமே மிகுந்த பயனைப் பெறுவர். வளர்ந்து வரும் தொழில்நுட்ப முன்னேற்றமும், அதிகரித்துவரும் தகவல் பெருக்கமும் நூலகங்களில் ஆவணவாக்கத்தின் தேவையை உணர்த்தி நிற்கின்றன. இவ்வகையில் இலங்கைத் தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவில் மேற் கொள்ளப்படும் ஆவணவாக்கற் செயற்பாடுகள் மிகுந்த பயனள்ளவையாகவும் பெருந்தொகையான ஆராய்ச்சியாளர்களின் தேவைகளை பூர்த்தி செய்வனவாகவும் அமைகின்றன. இக்கட்டுரையில் இலங்கை தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவின் செயற்பாடுகள் பற்றி ஆராயப்படுகின்றது.

Key words : ஆவணவாக்கம், ஆவணவாக்கற் செயற்பாடுகள், இலங்கை தேசிய நூலகம்

**இலங்கைத் தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவும்
அதன் செயற்பாடுகளும்**

தேசிய நூலகம் என்பது ஒரு நாட்டின் அனைத்து அறிவுப் பதிவேடுகளையும் ஒருங்கு திரட்டி அந்நாட்டு மக்களுக்கும் அவர்களின் எதிர்கால சந்ததியினருக்கும் பயன்படும் வகையில் பாதுகாக்கும் ஒரு நிறுவனமாகும். ஆத்துடன் நாட்டிலுள்ள ஏனைய நூலகங்களுக்கெல்லாம் தலையாய நூலகமாகத் திகழ்வதும் ஒரு தேசிய நூலகத்தின் முக்கியத்துவம் ஆகும்.

இவ்வகையில் இலங்கை

தேசிய நூலகமானது 1990ல் அப்போது சனாதிபதியாக இருந்த கௌரவ ஆர். பிரேமதாஸ அவர்களால் திறந்து வைக்கப்பட்டது. இந்நிகழ்வானது இலங்கைத் திருநாட்டின் கல்வி, கலாச்சார, தகவல் துறைகளில் ஏற்பட்ட குறிப்பிடத்தக்க படிமுறை வளர்ச்சியாகும். 1998ல் இலங்கை தேசிய நூலகம் என்ற பெயர், அதன் சேவைத்திறனுக்கு ஏற்றாற் போல் இலங்கை தேசிய நூலகம் ஆவணவாக்கற் சபை என மாற்றப்பட்டது. தேசிய நூலகத்தில், நூலீட்டல் பிரிவு, நூல் விபரப்பட்டியல் சேவைப் பிரிவு ஆவணவாக்கற் பிரிவு, வாசகர் சேவைப் பிரிவு, நூல்களைப் பேணும் பிரிவு, நூல்களைக் கட்டும் பிரிவு கல்வி, அபிவிருத்திப் பிரிவு போன்ற பல்வேறு பிரிவுகளும் காணப்படுகின்றன. இவற்றுள் ஆவணவாக்கற் பிரிவானது பல்வேறு சிறப்பான செயற்பாடுகள் மூலம் தேசிய நூலகத்தின் சிறப்பினை உயர்த்தும் வகையில் செயற்பட்டு வருகின்றது. இங்கு ஆவணவாக்கற் பிரிவு பற்றி விரிவாக ஆராயலாம்.

ஆவணவாக்கற் சேவைப் பிரிவு

ஆவணவாக்கற் சேவையானது தேசிய நூலகத்தின் சேவைகளுள் மிக முக்கியமான சேவையாகக் கருதப்படுகிறது. இச்சேவையானது தேசிய நூலகத்தில் கிடைக்கக் கூடிய தகவல் வளங்களைப் பற்றி தெரிவிப்பதோடு, நாட்டிலுள்ள பல்வேறு நூலகங்களிலும் பரவிக் கிடக்கும் தகவல் வளங்களைப் பற்றிய தகவல்களையும் வழங்குகிறது. இச்சேவையைத் திறம்பட நடாத்துவதற்கு, இலங்கைத் தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவானது பல்வேறு திட்டங்களை முன்னெடுத்துச் செல்கின்றது. ஆவற்றுள் மிக முக்கியமான ஒன்று தேசிய ஒருங்கிணைந்த நூலகப்பட்டியலாகும். இதைவிட இலங்கையில் வெளியாகும் புதினத்தாள்களின் கட்டுரைச் சுட்டிகள், அரசாங்க வெளியீடுகளுக்கான விபரப்பட்டியல், இலங்கையில் நடைபெற்ற கருத்தரங்குகளுக்கான சுட்டிகள், ஏனைய நூலகங்களுடனான வலைத் தொடர்புகள், இலங்கையில் நடைபெற்றுக் கொண்டிருக்கும் இனப்பிரச்சினை தொடர்பான தகவற் சுட்டி, நற்றெற் லங்கா எனப்படும் நூலகவியல் தொடர்பான தேசிய நூலகத்தின் செய்திச் சர வெளியீடு என்பன ஆவணவாக்கற் பிரிவினால் மேற்கொள்ளப்படும் ஏனைய செயற் திட்டங்களாகும். இவை ஒவ்வொன்றையும் பற்றி விரிவாகப் பார்க்கலாம்.

தேசிய ஒருங்கிணைந்த பட்டியல்

தேசிய ஒருங்கிணைந்த பட்டியல் என்பது ஒரு நாட்டின் நூலகங்களில் உள்ள நூலக சாதனங்கள் தொடர்பான விபரங்களை நூற்பட்டியலாக்க விதிமுறைகளுக்கு அமைவாக ஒரிடத்தில் ஒழுங்குபடுத்தும் பட்டியலாகும். தேசிய நூலகத்திற்கு வருகை தரும் வாசகர்களுக்கு தேவைப்படும் நூலக சாதனங்கள் தேசிய நூலகத்தில் இல்லாத பட்சத்தில் அச்சாதனங்களைக் கொண்டுள்ள ஏனைய நூலகங்களின் விபரங்களை அறிந்து கொள்ள தேசிய ஒருங்கிணைந்த பட்டியல் உதவுகிறது. தேசிய ஒருங்கிணைப்பு பட்டியலின் உருவாக்கமும் அதன் தொடர்ச்சியான நிருவகிப்பும் தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவின் முக்கிய செயற்பாடாகும். 1986 ஆம் ஆண்டில் 06 நூலகங்களுடன் ஆரம்பிக்கப்பட்ட தேசிய ஒருங்கிணைந்த பட்டியலுக்கான அங்கத்துவ நூலகங்களின் தொகையானது படிப்படியாக வளர்ச்சியடைந்து 2006 ஆம் ஆண்டில் நாட்டில் உள்ள 75 நூலகங்கள் வரை உள்ளடக்கியுள்ளது. பல்கலைக்கழக நூலகங்கள், பொது நூலகங்கள், அரச திணைக்கள நூலகங்கள், அரச சார்பற்ற நிறுவன நூலகங்கள், விசேட நூலகங்கள் தொழில் நுட்பக்கல்லூரி நூலகங்கள் போன்றன தேசிய ஒருங்கிணைந்த பட்டியலுக்கு பங்களிப்புச் செய்யும் நூலகங்களாகும். புல அங்கத்துவ நூலகங்கள் மின் அஞ்சல் மூலமாகவும், இறுவட்டுக்களின் மூலமாகவும், தகவல்களை அனுப்பி வைக்கின்றன. இதுவரை தரவுத் தளத்தில் 431061 தரவுகள் புகுத்தப்பட்டுள்ளன. 2001 ஆம் ஆண்டிலிருந்து தேசிய ஒருங்கிணைந்த பட்டியலானது OPAC உடன் தொடர்புபடுத்தப்பட்டுள்ளது. தற்போது தகவல் தேடுபவரின் தேடலை இலகுவாக்கும் வகையில் தேசிய நூலகத்தின் இணையத்துடன் இணைக்கப்பட்டுள்ளது. தேசிய நூலகத்தின் சுவர்களுக்கு அப்பாலும் விரிவு படுத்தப்பட்டுள்ள இச்சேவையை www.natlib.lk என்ற இணைய தள முகவரியில் பரிசீலிக்க முடியும்.

இலங்கை புத்தினத்தாள்களின் கட்டுரைச் சுட்டி

இலங்கையில் வெளியாகும் தேசிய பத்திரிகைகளில் இடம்பெறும் கட்டுரைகள் பற்றிய விபரத்தை இக்கட்டுரைச் சுட்டி கூறுகிறது. இலங்கையில் வெளியாகும் சிங்கள, தமிழ், ஆங்கில பத்திரிகைகளான லங்காதீப, தினமின, திவயின, சிலுமின, லக்மிம, தினகரன், வீரகேசரி, Daily Mirror, Sunday Island, Sunday Observer, போன்ற பத்திரிகைகளில் இடம்பெறும் கட்டுரைகள் இச்சுட்டியில் இடம்பெறுகின்றன. தமிழ் பத்திரிகைகளில் தினகரன், வீரகேசரி, ஆகியவற்றின் 1992, 1993, 1994 ஆண்டுக்களுக்குரிய பதிப்பித்த தொகுதிகள் தேசிய நூலகத்தினால் வெளியிடப்பட்டுள்ளன. ஏனைய ஆண்டுகளுக்குரியவை தற்போது தரவுத் தளத்தில் பதியப்பட்டு வருகின்றன. அவை தேசிய நூலகத்தின் இணையத்தளத்தில் இணைக்கப்பட்டுள்ளன. ஆய்வுகளில் ஈடுபடுவோருக்கும் ஏனைய பொதுவாசகர்களுக்கும் இது மிகவும் பயனுள்ள ஒன்றாகும்.

இலங்கையில் வெளியாகும் அரச வெளியீடுகளின் அறிக்கை.

இலங்கை பாராளுமன்றம், மற்றும் அமைச்சரவைகள், திணைக்களங்கள் அரசுதறை சார்ந்த நிறுவனங்கள் முதலியவற்றால் வெளியிடப்படும் வெளியீடுகள் பற்றிய விபரங்களைத் தருவதே இவ்வறிக்கையின் நோக்கமாகும். இதுவரை கால வெளியீடுகளில் 1990 தொடக்கம் 2004 வரையான காலப்பகுதிக்குரிய 8 வெளியீடுகளின் விபரங்கள் பதிக்கப்பட்ட தொகுதிகளாக வெளியிடப்பட்டுள்ளன. இவற்றில் சிங்கள, ஆங்கில மொழி மூல வெளியீடுகளின் தகவல்களைப் பெற்றுக் கொள்ளலாம்.

இலங்கையில் நடைபெற்ற கருத்தரங்கு மாநாடுகளுக்கான சுட்டி

இச்சுட்டியானது ஆய்வாளர்களுக்கு மிகவும் பயனுள்ள ஒரு தகவல் வளமாகும். அவர்கள் தங்களுடைய துறைகளில் நடைபெற்ற கருத்தரங்குகளின் விபரங்களையும், அவற்றை நடாத்தியோர் பற்றிய விபரங்களையும் இச்சுட்டி மூலம் பெறக்கூடியதாக உள்ளது. இக்கருத்தரங்கு மாநாட்டுச் சுட்டியில் கடந்த 25 வருடங்களாக இலங்கையில் நடைபெற்ற கருத்தரங்குகளின் விபரங்கள் தொகுத்து வழங்கப்பட்டுள்ளன. தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவினால் இச்சுட்டிக்குரிய தரவுத்தளம் உருவாக்கப்பட்டுள்ளது.

பட்டப்பின் ஆய்வுக்கட்டுரைகளுக்கான தகவற் சுட்டி

இச்சுட்டியில் 1981 தொடக்கம் 2000 ஆண்டுவரை இலங்கையிலுள்ள ஆய்வாளர்களால் தமது பட்டப்படிப்பை நிறைவு செய்யும் பொருட்டு இலங்கையிலுள்ள பல்கலைக்கழகங்களுக்கு சமர்ப்பிக்கப்பட்ட ஆய்வுகளின் விபரங்களும், மற்றும் இலங்கை ஆய்வாளர்களால் வெளிநாடுகளிலுள்ள பல்கலைக்கழகங்களுக்கு சமர்ப்பிக்கப்பட்ட ஆய்வுகளின் விபரங்களும் அடங்கியுள்ளன.

இச்சுட்டியானது உண்மையில் ஆய்வு நிறுவனங்கள், பட்டப்பின்படிப்பு நிறுவனங்கள், பல்கலைக்கழகங்கள், மற்றும் விசேட நூலகங்கள் முதலியவற்றில் உள்ள பட்டப்பின்படிப்பு ஆய்வுகளின் தரவுப்பட்டியலாகும். ஏனெனில் இச்சுட்டியில், ஆய்வுக்கட்டுரையின் தலைப்பு, வருடம், சமர்ப்பிக்கப்பட்ட உயர்க்கல்வி

நிறுவனத்தின் பெயர், ஆய்வுக்கட்டுரை உள்ள இடம் போன்ற தகவல்கள் வழங்கப்பட்டுள்ளன.

புதிய ஆய்வுகளை மேற்கொள்வோருக்கு தமது தலைப்புக்களை தெரிவு செய்வதற்கும், ஆய்வுகளை மேற்கொண்டுள்ளோருக்கு அவை தொடர்பான தகவல்களை திரட்டுவதற்கும் இச்சட்டி மிகவும் உறுதுணையான ஒன்றாகும். தற்போது 2001 – 2006 வரையில் சமர்ப்பிக்கப்பட்ட ஆய்வுகள் பற்றிய விபரங்கள் சேகரிக்கப்பட்டு அதற்குரிய தகவற் தளம் தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவினால் தயாரிக்கப்பட்டு வருகின்றது.

இந்த ஆய்வுக்கட்டுரைச் சுட்டியானது தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவினால் மூன்று தொகுதிகளாக வெளியிடப்பட்டுள்ளன. இதில் முதல் தொகுதியில் 1359 ஆய்வுக் கட்டுரைகளின் விபரங்களும் II ம் தொகுதியில் 951 ஆய்வுக்கட்டுரைகளின் விபரங்களும் III ம் தொகுதியில் 816 ஆய்வுக்கட்டுரைகளின் விபரங்களும் உள்ளன.

இலங்கை இனப்பிரச்சினை தொடர்பான ஆவண தரவுத்தளம்

இலங்கையில் நடைபெற்றுக்கொண்டிருக்கும் இனப்பிரச்சினை, போர், பேச்சுவார்த்தை சமாதானம் தொடர்பாக வெளிவந்த நூல்கள், பருவ இதழ்கள், பத்திரிகை கட்டுரைகள் போன்றவற்றின் விபரங்கள் இத்தரவுத் தளத்தில் உள்ளன. Database on Ethnic problem and devolution of power in Srilanka என்ற இத்தரவுத் தளத்தின் பெயரானது DEPEC என்ற குறுகிய பெயரில் தேசிய நூலகத்தின் இணையத்தளத்தில் காணப்படுகிறது. இவ்வாறான பாரிய அளவிலான செயற்றிட்டங்கள் தவிர கடந்த காலங்களில் செயற்படுத்தி அச்சில் வெளிவந்துள்ள பல தகவல் திரட்டுகளின் வெளியீடுகள், தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவின் செயற்பாட்டு விஸ்தீரணத்தையும், அது வாசகர்களுக்கும் ஆய்வாளர்களுக்கும் ஆற்றும் அளப்பரிய சேவையையும் எடுத்துக் கூறுகிறது. அவ்வாறு வெளிவந்த வெளியீடுகள் பற்றி மிகவும் சுருக்கமாகப் பார்க்கலாம்

(1) இலங்கையிலுள்ள சமூக விஞ்ஞானிகள் பற்றிய விபரத்திரட்டு

இலங்கையிலுள்ள பல்கலைக்கழகங்கள், அமைச்சரவை, அரசாங்க திணைக்களங்கள், கூட்டுத்தாபனங்கள், அரச சார்பற்ற நிறுவனங்கள், தனியார் நிறுவனங்கள், நூலகங்கள் ஆகியவற்றில் தொழில் புரியும் அறிஞர்களது பெயர், முகவரி, தொலைபேசி இலக்கம், கல்வி நிபுணத்துவ தன்மைகள், திட்டங்கள், அவர்களின் வெளியீடுகள், நிபுணத்துவ அமைப்புக்களில் அங்கத்துவம், ஆகியவை பற்றிய விபரங்களைத் தருகின்றது. இது இரு தொகுதிகளாக அச்சிடப்பட்டுள்ளது.

(2) இலங்கையிலுள்ள புனித தலமாகிய கதிர்காமம் பற்றிய நூல் விபரப்பட்டியல்.

இலங்கையிலுள்ள புனித யாத்திரிகர் தலமாகிய கதிர்காமம் பற்றிக் கூறும் நூல்கள், பருவ இதழ் கட்டுரைகள், பத்திரிகைக் கட்டுரைகள் பற்றிய விபரங்கள் இப்பட்டியலில் தரப்படுகின்றன. சிங்கள மொழியிலும், ஆங்கில மொழியிலும் வெளிவந்த விபரங்கள் அடங்கிய இப்பட்டியல் 1994ல் வெளியிடப்பட்டுள்ளது. 246

தரவுகளைக் கொண்டுள்ள இப்பட்டியலில் 165 விபரங்கள் ஆங்கில மொழியிலும், 81 விபரங்கள் சிங்கள மொழியிலும் உள்ளன.

(3) தென்னாசியப் பிராந்திய நாடுகளின் அமைப்பான 'சார்க்' பற்றிய நூல் விபரப்பட்டியல்

சார்க் நாடுகளின் தலைவர்களுக்கான கூட்டம், 1991ல் நவம்பர் 7-9 கொழும்பில் நடைபெற்றது. இந்த வரலாற்று நிகழ்வைக் கொண்டாடு முகமாக தேசிய நூலகம் புத்தகக்கண்காட்சி போன்ற நிகழ்சிகளை ஒழுங்கு செய்திருந்தது. அதன் பின்னணியாக ஆவணவாக்கற் சேவைப் பிரிவானது இலங்கையிலுள்ள சில நூலகங்களில் சார்க் அமைப்பு பற்றி கிடைக்கக் கூடிய ஆங்கில மொழியிலான நூல்கள், பருவ இதழ் கட்டுரைகள், பத்திரிகை கட்டுரைகள் போன்றவற்றை ஒரு நூல் விபரப்பட்டியலாகத் தயாரித்து வெளியிட்டது. பிரதானமாக தேசிய நூலகம், பண்டாரநாயக்கா சர்வதேச கல்வி, ஆவணவாக்க நிலைய நூலகம், வெளிவிவகார அமைச்சு நூலகம், மற்றும் விளையாட்டுத்துறை அமைச்சு நூலகம் ஆகிய நூலகங்களில் இருந்த தகவல்களின் விபரங்கள் இதில் சேர்க்கப்பட்டுள்ளன. பதிவுகள் யாவும் விடயத்தலைப்புக்களாக உள்வாங்கப்பட்டு பின்னர் விடயத்தலைப்புக்கள் அகரவரிசையில் ஒழுங்கு படுத்தப்பட்டுள்ளன. இந்த விபரப்பட்டியலானது உள்நாட்டிலுள்ளவர்களுக்கு மட்டுமன்றி சார்க் பற்றி அறிய விரும்பும் வெளிநாட்டு ஆய்வாளர்களுக்கும் உதவக்கூடிய ஒன்றாகும்.

(4) வாசிப்புப் பழக்கத்தை தூண்டும் நூல்கள் மற்றும் கட்டுரைகள் பற்றிய விபரப்பட்டியல்

தேசிய நூலகம் 2004 ஆம் ஆண்டு ஒக்டோபர் மாதத்தை வாசிப்பு மாதமாகப் பிரகடனப்படுத்தியது. அதன் பின்னணியாக தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவு, வாசிப்பு பழக்கம், வாசிப்பால் ஏற்படும் நன்மைகள் பற்றிய நூல்களினதும், பருவ இதழ்களில் வெளிவந்த கட்டுரைகளினதும் விபரங்களை பட்டியலாகத் தயாரித்து வெளியிட்டது.

(5) இலங்கையிலுள்ள சமூகவியல் சார்ந்த நூலகங்கள், தகவல் நிலையங்கள், தரவுத்தளங்கள் முதலியவற்றின் விபரப்பட்டியல்

இந்த விபரப்பட்டியலின் முதற் பதிப்பு 1986ல் வெளியிடப்பட்டது. எந்த ஒரு விபரப்பட்டியலும் காலவதியாகும் தன்மையைக் கொண்டிருப்பதால், இந்த விபரப்பட்டியலையும் காலத்திற்குக் காலம் புதுப்பித்து 1990ல் இதன் இரண்டாம் பதிப்பையும், 1995ல் இதன் மூன்றாம் பதிப்பையும் தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவு வெளியிட்டது.

இந்த விபரப்பட்டியலில் 91 நிறுவனங்களின் விபரங்கள் அகர வரிசையில் ஒழுங்குபடுத்தப்பட்டுள்ளன. ஒவ்வொரு பதிவிலும் நிறுவனத்தின் பெயர், முகவரி, தொலைபேசி இலக்கம், நிறுவனம் ஆரம்பமாகிய காலம், பிரதான நூலகர் பெயர், ஏனைய நூலக அலுவலர்களின் எண்ணிக்கை, அந்நூலகத்தில் கிடைக்கக்கூடிய நூல்கள், பருவ இதழ்கள் மற்றும் நூலக சாதனங்களின் விபரங்கள், பாவிக்கப்படும் பகுப்பாய்வுத் திட்டம், வழங்கப்படும் சேவைகள், வலையமைப்பு கூட்டுறவின் அங்கத்துவம், நிறுவனத்தின் வெளியீடுகள் போன்ற விபரங்கள் தரப்பட்டுள்ளன. நூலகர்களுக்கும், நூலக அதிகார சபை போன்றவற்றிற்கும் அவர்களின் அபிவிருத்தி, சேவைத்திட்டம் போன்றவற்றிற்கு உதவக்கூடிய ஒரு கைநூல் போல் இது உள்ளது.

(6) Natnet lanka News letter

நற்றெற் லங்கா என்பது தேசிய நூலகத்தினால், ஆவணவாக்கற் பிரிவின் அனுசரணையுடன் வெளியிடப்படுகின்ற அரையாண்டுச் செய்திமடலாகும். ஆங்கில மொழியிலான இச்செய்தி மடலில் முதல் வெளியீடு 1998 இல் ஆரம்பமாகியது. இதில் முக்கியமாக நூலக வலையமைப்புக் கூட்டுறவு பற்றிய செய்திகளும், அவை தொடர்பாக நடைபெற்ற, நடைபெற போகின்ற கருத்தரங்குகள், பயிற்சிப் பட்டறைகள் பற்றிய விபரங்களையும் வெளியிடுகின்றது. ஒவ்வொரு தடவையும் 500க்கு மேற்பட்ட பிரதிகள் அச்சிடப்பட்டு நாட்டிலுள்ள அனைத்து நூலகங்களுக்கும் விநியோகிக்கப்படுகின்றன.

இலங்கையிலுள்ள ஓலை சுவடிகளின் விபரப்பட்டியல்

இவ்வெளியீடானது இலங்கையில் அச்சுக்கலை தோன்ற முன்னர் பாவனையில் இருந்த ஓலைச்சுவடிகள் பற்றிய விபரங்களை தருகின்ற நூல்களின் விபரங்களைக் கொண்டுள்ளது. இலங்கையிலுள்ள பழமை வாய்ந்த தகவல் நிறுவனங்களாகிய இலங்கைத் தேசிய நூலகம், பேராதனைய பல்கலைக்கழக நூலகம், தேசிய சுவடிகள் திணைக்களம், தொல் பொருள் பட்டப்படிப்பு நிறுவனம் ஆகியவற்றிலிருந்து திரட்டிய தகவல்களின் அடிப்படையில் ஆங்கிலத்திலும், சிங்களத்திலுமாக 158 தரவுகள் தரப்பட்டுள்ளன. இது 2007ல் வெளியிடப்பட்டுள்ளது.

தகவல் வலையமைப்பிற்கான கூட்டறவு

தகவல்களைத் திரட்டி, ஆவணப்படுத்தி, தரவுத் தளங்களை உருவாக்குவதோடு மட்டுமல்லாமல் ஏனைய நூலகங்களின் தகவல் வலையமைப்புக்களுடன் நிபுணத்துவக் கூட்டுறைப் பேணி வருவதும் தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவின் குறிப்பிடத்தக்க ஒரு சேவையாகும். தற்போது இலங்கையில் பல நூலக வலையமைப்புக் கூட்டுறவுகள் காணப்படுகின்றன. உதாரணமாக Scientific and technical information Network (SLSTINET), Health Library and information network (HELLIS), Agriculture information network (AGRIS), Environmental Library network (ENLINET) என்பன குறிப்பிடத்தக்கவை. இவை தொடர்பான கருத்தரங்குகள், கூட்டங்களில் பங்கு பற்றுவதன் மூலம் இவற்றிற்குரிய தகவற் பரிமாற்றத்தில் தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவு குறிப்பிடத்தக்க சேவையை ஆற்றி வருகிறது.

மேற்கூறிய சேவைகள் அனைத்தையும் தொகுத்துப் பார்க்கும் போது, தேசிய நூலகத்தின் ஆவணவாக்கற் பிரிவானது அதன் திறமையான, பயனுள்ள செயற்பாடுகள் மூலம் நாட்டிலுள்ள புலமைசார் மக்களுக்கு வழங்கிவரும் தன்னிகரற்ற சேவையை நாம் காணமுடிகிறது. இன்னும் பல பயனுள்ள சிறப்பான செயற் திட்டங்கள் வருங்காலங்களில் செயற்படுத்தப்படவுள்ளன.

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Importance of Developing Reading Habits for the Survival of the Information Society

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Abstract

Reading is an active attempt on the part of the reader to understand a writer's message. The aim of the paper is to examine the role of reading in a society that places great emphasis on information and communication technologies and to examine the factors to be considered in developing the reading habit. It describes some methods to promote the habit of reading. Reading habit in the paper means a behavior which expresses the likeness of reading of an individual. It also describes the importance of reading especially in this information society. Parents' educational level, economic level of the family, atmospheric condition of the reading environment, availability to access reading materials, language fluency, reading skills of an individual, facilities available in libraries and availability of time for reading are some of the important factors affecting the habit of reading. Parents can make reading a part of the family's lifestyle. Public libraries, schools and other educational authorities should play an active role to develop not only a reading society but also 'want to read' society.

Keywords:

Introduction

Reading is the ability of identifying and recognizing printed or written symbols that stimulate the recall of familiar concepts (Mohamed, 2003). Reading is important for everybody in order to cope up with new knowledge in the changing world of the technological age. The importance and necessity will hopefully continue to increase in the years to come. However, the number of those who know how to read but do not read enough is also increasing. We are now living in the information age. The new age is largely characterized by the development that has taken place in technology and, in particular, information and communication technologies. The convergence of telecommunications, broadcasting and computers has had significant impact on society, comparable with previous major societal changes such as the industrial revolution or the advent of the printing press. Reading today is a

commodity essential for survival. In this information age, reading and reading skills will enable users not just to survive, but to thrive.

Lifelong learning is important because continuous learning is essential for the survival in a changing information society. The information society is a term frequently used to describe the social environment and the impact of information and communication technologies on the way people live. The transition of society from an economy based primarily on manufacturing to one that is predominantly based on information compels the people to develop reading habits to know about the new knowledge. Now the information is used as an economic resource. It is possible to identify greater use of information among the general public. People use information more intensively in their activities as consumers. Reading today is a commodity essential for survival. Reading is an activity that can be done anywhere, anytime whenever people have the spare time and the interest for reading. The ultimate goal of reading is to be able to understand written material, to evaluate it, and to use it for one's needs.

Importance of Reading

Reading is an activity characterized by the translation of symbols or letters, into words and sentences that give meaning to the individual. It is more important today than it ever was. Reading is crucial to be an informed citizen, to succeed in one's chosen career, and to personal fulfillment. There are more access to text than ever, more specialized magazines, more books being published, more news papers and more articles to read on the internet. A world of information may be physically and politically available but there is no value of it, if it cannot be accessed due to an individual lacking the habit of reading.

Reading exposes people to the accumulated wisdom of human civilization. Mature readers bring to the text their experiences, abilities, and interests; the text, in turn, allows them to expand those experiences and abilities and to find new interests. Reading is one of the most fundamental building blocks in a child's development. Children who read well do better in other subjects and in all aspects of schooling and beyond. In addition, reading can be a fun and imaginative activity for children, which opens doors to all kinds of new worlds for them. Unless reading develops as an automatic activity, outside and unrelated to the classroom, it can make little contribution to the intellectual growth of the student and hence to his overall personality. Reading and writing are important ways of using language to communicate. As the world becomes more complex, reading is increasingly important for children trying to find their place in it. The ability to read has economic consequences. Adults who are better than average readers are also higher than average earners. The growing technicalization of society has brought increased demands for literacy, which the schools are hard

pressed to meet. A higher level of literacy is needed in business and industry, and even everyday life. The reading ability needed to comprehend materials important to daily living. Therefore the lack of sufficient reading ability definitely impairs a person's capacity to function in the modern society.

Reading has been a lifelong joy of an individual. To the individual, 'reading' is an important measure for emotional purification and recharge of knowledge, and to the country or society, it is the foundation of maturity and development. Good readers rapidly recognize words without having to think about what the words are and they automatically activate the meaning of the words they are reading. They can construct the meaning of sentences, paragraphs, and even larger units of text without undue effort. Readers who are not fluent readers of words have comprehension difficulties that increase in severity as words and sentences become more complex and as they increasingly are asked to read subject matter text such as science, social studies, and literature. This creates a sense of having to work much harder than peers to complete reading assignments and it sometimes results in students essentially giving up an academic accomplishment.

Information literacy is a basic human right to lifelong learning. It is a prerequisite for participating effectively in an information society. To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information (ALA, 1989). Success in information literacy is mainly dependent on reading materials. Information literate students are competent, independent learners. They know their information needs and actively engage in the world of ideas. They display confidence in their ability to solve problems and know what relevant information is. They operate comfortably in situations where there are multiple answers, as well as those with no answers. They hold high standards for their work and create quality products (Doyle, 1994).

Reading is essential in helping young people to develop self-esteem, and to become socially and educationally successful. If we want to get on in life we need to have developed the ability to interact with others and to manage our own emotions. Reading literature will help us to develop the habit of understanding and respecting others' ideas. It will lead to face the societal challenges. Reading biographies of good people can make changes to an individual's life style and behaviour. Younger generation can be aware of religious and cultural aspects of life pattern mainly by reading literature.

Reading is an indispensable tool for achieving emotional stability, enjoying leisure hours, sharing the difficult experiences, which are encountered in books and for keeping abreast of happenings in the world at large. (Ogunrombi and Adio, 1996)

"Reading expands the mind, it stokes the imagination, it exercises your brain, it challenges your thinking...there's so much *good* that reading can do - and yet it seems to be a dying activity in today's electronic, media enhanced world " expressed by Williams and Rose(2004). Books offer ideas, thoughts, and knowledge that can spark action with a power to overcome even the most despicable evil. We need those ideas now more than ever. It is clear the need to communicate these ideas and reading puts us in direct contact with those ideas.

Recreational reading show better development in reading, writing, grammar and enlarges vocabulary and builds fluency. These results hold for the aspects of language competence and build a person's knowledge of the world. In other way, it develops a better written communication skill (Stephen, 2004). The more and more you read you can improve your language proficiency.

Factors affecting the habit of reading

There are many integrated factors affecting the habit of reading.

Parent educational level

Parents' educational and occupational levels will affect the reading habit of their children. Where parents are illiterate, children who are trying to form meaningful reading habits cannot obtain help or understanding. The attitude of the parents to children who are making efforts to read is very important in helping them to form the reading habit. If parents do not know the value of reading, they will not be able to appreciate or encourage their children's reading. In some homes children who make concerted efforts to read are often scolded and branded as lazy.

Economic level of the Family

For economic reasons, child labour predominates in some places. Parents prefer their children to work with them as a help rather than reading books, when they are not in school. These activities not only take time but sap the energy of the affected children and consequently militate against the cultivation of reading habits. In this type of situation, interested children begin to think that the habit of reading is not suitable for the economical status of the family, and give up the habit of reading. How can those parents who are unable to satisfy their family food requirements, purchase reading materials to encourage their children's reading habits? So, parents' economical status directly affects the habit of reading.

Atmosphere

The right atmosphere is necessary for developing and sustaining good reading habits. If children are living in rented apartments which are overcrowded with large families, noisy and poorly lit without electricity, this is not conducive to reading. Failure in electricity supply leads to reading with hurricane lanterns, an un-pleasurable way to read as a result of the accompanying heat and perspiration. Certainly, this does inhibit the development of good reading habit. The life style of the neighbours and friends of an individual also affects the habit.

Availability of reading materials

The acquisition of a good reading habit depends largely on the availability of the right type of reading material. Availability of greater amount of materials of different varieties is positively encouraging a person to read. A study shows students who come from homes where there is a variety of reading materials tend to read variety of magazines, spend more time reading in a week, and read a variety of newspapers (Pandian, 2000). Shortage of interested reading material directly affects the habit of reading.

Language fluency and Reading skill

If a person is fluent in a language he can read. In another way, reading increases a person's language fluency. Reading skills are essential to become functionally literate. Lack of reading skills also inhibits the formation of good reading habits. Dearth of trained language teachers and reading teachers to teach reading inhibit the habit of developing reading. If the teaching in schools is bored and uninteresting, students will not be able to develop the habit of reading.

Facilities available in a library.

Libraries which are poorly provisioned with outdated books; uncomfortable seats; poor ventilation and light, and lack of services of a professional librarian will affect the habit of reading. If a library is well stocked with new material it will encourage the people to visit the library.

Lack of time

Children do not have time to read. And most children are sent to additional classes after school hours giving no time for them to relax, let alone to read. Wherever the equipped library is available, students must be given enough time to use the library.

The lieu of electronic media

Television potential effect on children's reading performance has become an issue of growing concern among education and often cited as a cause for the decline in reading if children spend their viewing time only on programs which entertain rather than educate. (Sangkaeo,1999).

Cultural pattern and personal attitude

We are not a reading society but a chatting society. Many people spend more time on chatting. The cultural habit of people prefer to listening and chatting more than reading. Personal attitude towards reading affects the development of reading habit.

Effective methods and some successful programs for reading habit promotion

Roles of Family

Parents are clearly important socializing agents. Parents, who spend time reading to their children, give them the best possible start on the road to literacy. Many research studies have pointed out that the children who do best in literacy skills at school are those who come from homes where there are books, where their parents spend reading time on reading to their children and where children see their parents and old siblings engage in reading activities (Sangkaeo, 1999).

Parents can make reading as part of the lifestyle of the family

a. Visit the library

Libraries have a wide selection of books to borrow. Many libraries have fun activities, computer games for children to attract them to visit the library. Let the kids to choose what they want to read. Get the membership from different types of libraries. Visit these libraries frequently especially during the school holidays.

b. Lead by example

Read the newspaper at the dining table; pick up magazine at the doctor's clinic when waiting for the doctor. If kids see the adults around them reading often, they will understand that literature can be an important part of their life.

c. Turn off the Television

Limiting your family television viewing time will save some time for reading. Many people say that they don't have enough time. Television is one of our major time consumers. People should make their television watching more conscious and less habitual. There is nothing wrong with watching television shows you really enjoy. Where the time gets lost is

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turning it on, and scanning to find “something to watch.” Those are the times to turn it off and pick up a book.

d. Help kids find time to read

Always remember to leave some time in their schedules for reading. Let the kids choose what they want to read.

e. Talk it up

Talking with your kids on you have read also let them know the value of reading. Read the same book your child is reading and discuss it.

f. Create a learning environment

Create a learning environment by setting up a mini reading corner and flood with reading materials. Be sure to have newspapers, magazines and informational materials on hand that spark the interest of a young reader. Good light and posture are associated with effective reading. In other words, sitting up in a comfortable chair will keeps a person more alert than curled up or stretched out in a bed. Good lighting and correct posture are needed for serious reading.

g. Read aloud with kids

Read story books aloud enthusiastically with children. Don't forget to improvise different voices or wear a silly hat to make the story much more interesting.

h. Shared reading with a parent

You start off by reading books to your child. You first read a page and then let your child read a paragraph. You continue the process until your child is reading to you, rather than the other way around. The selection of the book should be the interest of the child. The philosophy is to provide them with whatever they are interested in and let them hone their reading skills on that content. If they find that reading is not difficult it will lead to an interest in reading other kinds of content, and that in turn might lead to less difficulty in reading textbooks and other academic material.

i. Make the availability of reading materials

When the children are flooded with books they automatically tend to read books. Always have a budget to purchase books for children. Subscribe to reading material in your child's name. Magazines like sports, or serial story books etc. It will encourage them to read at least the particular material.

While traveling encourage the child to read the traffic signs, notices and other prominently visible signs. Show your children what those signs represent.

Reading is the most important skill, children learn in their development. Reading can be a fun and imaginative activity for children, which opens doors to all kinds of new worlds for them. Boyse (2007) explains in his research five early reading skills which are essential to develop the habit of reading.

- Phonemic awareness - Being able to hear, identify, and play with individual sounds in spoken words.
- Phonics – Being able to connect the letters of written language with the sounds of spoken language.
- Vocabulary- The words kids need to know to communicate effectively.
- Reading comprehension- Being able to understand and get
- Fluency- Being able to read text accurately and quickly.

General reading skills are practiced at reading. The more we read, the better we get at it, and the more we enjoy it. Focus on literacy activities that your child enjoys, so that reading is a treat, not a chore. Reading is an integral part of people's lives from infancy to old age. The American Academy of Pediatrics recommends daily reading to children beginning at the age of six months. Talk about pictures with your little one; sing the text to keep baby's attention; help your baby touch and feel in the texture of books.

School Environment

The school is the center in promoting reading habits and information skill among children. The teacher is the key factor who integrates all activities of children's learning. Individual schools could provide opportunities for children to read through carefully planned opportunities, time and materials. School libraries are the first library contact students get before graduating in to adult life. A well stocked school library with a pleasant professional teacher librarian is an encouragement to develop the reading habit among students in their school life. Providing a wide range of resources is very important if students are to read for pleasure. Reading materials must start at children's level and must include carefully planned programs for broadening their interest and elevating their taste. A library period should be created in the school time table for each class. Professional teacher librarian should be appointed to guide the students regarding the usage of the library resources. Some reading activities are suggested in the manual for teacher librarians by Yapa (2002). Reading activities for primary children are story telling, silent reading and reading aloud. Reading activities for junior secondary and senior secondary school children are book share, silent reading in the class, literature circle and read aloud.

Public libraries

In addition to the common library services, public libraries can provide extension services to develop reading habits among the community. For example - organizing story hours for children, mobile libraries, arranging talks regarding the importance of reading, arranging reading system, encourage public to know about books and book sources both reading and non reading groups, and promote the production and distribution of easy to read pamphlets and low price printed material which would encourage the interest of the public.

Establishing children's libraries

Organizing of activities and facilities for children's libraries is also important to encourage them to read. Each local and state government should encourage the children by setting up children's libraries in villages and towns and stocking them with reading materials for the use of children. Not every child can afford to buy books. Therefore it is necessary for the children's library to be a place for collective reading and community life.

Educational reforms

Teacher training institutions should equip prospective teachers by offering comprehensive courses in the teaching of reading and make it one major area of specialization. Specialization in reading should be offered at the postgraduate level of teachers' courses. Educational departments should provide opportunities to teachers to participate in seminars and workshops on the promotion of reading conducted locally and internationally in order to be trained in teaching reading activities. Most teachers forget that all teachers are reading teachers. Students who have problems in studying mathematics might have reading problems as the real cause. It is not only the duty of the language teachers to promote the reading habit. Changing the present educational system is also an important factor to be considered; e.g. shifting the school curriculum from routine learning to a more creative oriented approach. More emphasis must be laid on allocating time for general reading in the school curriculum and time tables so that students will invariably have to devote some time in reading books on their chosen subject.

Introducing Family Literacy Programs

This program is to ensure that families at the lowest ends of both literacy and economic will have opportunities to improve their education, economic and social well-being through quality family literacy programs. It is adopted in developed countries addresses the basic educational needs of parents and children from low income families by providing a unified program of

- Adult basic or secondary education and literacy programs for parents educational development.
- Assistance for parents to effectively promote their children's
- Early child hood education for children.

Main goals are

To help parents improve their literacy or basic educational skills.

To help parents become full partners in educating their children and

To assist children in reaching their full potential as learners.

Adult education focuses on increasing parents' literacy skills in reading. It will help their children's reading habit. The Family Literacy Program tries to promote reading within the family. As a part of each class curriculum, children's books on various levels are regularly read and discussed in class. The adults then borrow the books to read with their children. This project has been enthusiastically endorsed by the adults (parents), and feedback from the parents and children has been very positive. By providing a definite activity for parent and child, the literacy program helps to set the habits of family reading by providing integrated services for families, where children and their parents learn together to develop habits of lifelong learning; and support families committed to education and to economic independence.

Book prize as gift

Giving packets of good books to the child as a gift on festive occasions like birthday, New Year's Day and X-mas is another good tradition which promotes and sustains the reading habit in the child. Once child becomes interested in books, he would be excited on receiving books on such occasions and would like to develop a library of his own. There could be other school competitions also for gifting books. Books can be perfect gift in all occasion.

Book Markets

An important area in which the government can help to foster the reading habit is the establishment of book markets in all important towns. The way we make provision for vegetable markets, grain markets, cloth markets, etc., no book market is available. A lover of books has to go from shop to shop and locality to locality in order to buy books of his choice and interest. The book market should have attractive and specially designed stalls for youngsters. Such a market can also be a center for national integration, bringing under one roof publications in all major languages available in the country. It would also develop into an attractive social and educational center. Establishing book stalls at vital

points in collaboration with the agencies concerned (example railway station, post office, petrol shed and children parks) is another way of promoting reading habits.

Book Fairs and Festivals

Book weeks, Book fairs and special book releases organized by professional bodies are also important. They not only provide information about books but also help in fostering book-mindedness in the people. They lead prestige to the book as a commodity and create the kind of psychological atmosphere which is vital to the reading habit. Educational institutions also organize special library days such as library day, library week, and national reading month etc.

Using new formats in computer and mass media to promote reading

Mass media nowadays plays an important role in people's life. Television seems to have had a positive impact on children's reading habits despite the popular belief that it has a negative effect. Most of their favorite books have appeared as TV series, which brings up the possibility that this media could be very effectively promoting reading among children. (Yapa, 2004). Proper steps should be taken to promote the use of electronic media like TV, radio and video as a tool to promote reading. 'The importance of reading' and 'the reasons why we have to read books' etc can be produced as drama, an advertisement for the betterment of the public and documentaries which are both interesting and informative. These programmes should be telecasted at children's time on the educational channel and the video to be distributed among schools and libraries as a new educational material. Reading promotion activities can be carried out in many ways by using mass media. Telecasting newly published materials, reading lists of books for children, book reviews, book talks and list children's book awards are effective ways to encourage reading.

Developing the reading skills may be aided by the use of the web. A school in Clarkesville, U S A, recently won an award for using technology to enhance reading skills. There are actually huge numbers of stories online, and a wealth of web sites that can be accessed by children searching for their favourite authors and characters (Eyre, 2003). We can create a web site which provides link to series of stories. It will make the children easy access to sources and encourage them to read. The web design should be in an attractive manner.

Production of children's literature

Government encourages the publishers to create and develop easy, attractive and interesting books for children. It is urged that publishers put more emphasis on quality than commercialism. Government should take steps to bring down the cost of printing materials. Some schemes have to be devised and implemented to make printing materials available to the printers and publishers at a comparatively low rate with some subsidy facility to enable them to reduce the prices of their books and publications. There should be a central body set up for distribution of books and publications by the publishers and printers, so that they will be free from the grip of the established monopoly distributors. Make the good quality new printing techniques available to the printers especially for children's books to produce high quality attractive books. The academic world, the media and the publishing circles should try to help improve children's reading environment by spreading information about the importance and need for reading. Books for children have to be written on widely different fields of experience and knowledge within the range of children's comprehension and reading ability for all levels. The story books should be of diverse kinds such as animal stories, folk stories, stories related to child's environment etc. Measures have to be taken for the production of books of diverse kinds to suit different age levels. Educators and writers have to think of producing books for the disabled children, especially for the mentally backward also. Steps have to be taken to train writers to become more creative and awaken child's imagination and curiosity so that children begin to read for pleasure, which is a stepping stone for a life long interest in reading.

Arranging Competitions

Competitive programs can be arranged by schools, public libraries and various educational organizations to encourage the people to read. Arranging reading programs and reading camps which cover various activities with local writers and film shows and slides shows, reading contests, Book talks, Creative poetry, Quiz competitions, Puppet shows and drama activities related to reading interests should be organized.

Conclusion

It will be seen from the discussion so far that reading is the most important skill that the children learn in their development. Parents play a critical role in helping their children develop not only the ability to read but also to enjoy reading. Teachers, parents, librarians and other educational authorities are all involved in promoting the reading habit. Reading has to be strongly promoted as an interpersonal and social or family related activity. Unless reading develops as an automatic activity it can make little contribution to the intellectual growth of the student and hence to an individual's overall personality.

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Book Review

The Theory and Practice of the Dewey Decimal Classification System / M.P. Satija .-Oxford : Chandos Publishing, 2007. xix,206p., ISBN-13:978 1 84334 234 2

Reviewed by Professo. P. Ranasinghe, Head, Department of Library and Information Science, University of Kelaniya and the President of the Sri Lanka Library Association

Professor M. P. Satija's latest contribution to DDC literature is "The theory and practice of the Dewey Decimal Classification System".

There is no doubt that DDC is the most popular library classification in the world. Among the many factors that have contributed to its popularity, support given by the writers on DDC is paramount. However, the importance of this factor does not seem to be discussed sufficiently. Wide usage of a classification system is not possible without the assistance of writers who expose, clarify, evaluate and prepare guide-books, etc. on it.

Prof. Satija's book is to be evaluated within this context. His contribution to DDC literature is unique. Especially, for the popularity of DDC in South Asian countries the contribution made by his publications is enormous. He is one of the few Asian experts to work with famous DDC editors such as John P. Comaromi. It is not an exaggeration to recognize him as the DDC guru in the region.

His present work is a comprehensive guide to the DDC 22nd edition. However, in elucidating the concepts the author does not confine only to DDC 22. He briefly covers entire history and development of the DDC system into its faceted stage as at present.

The book contains 14 chapters, 4 appendices, glossary of terms, references and further reading and an index.

Chapter one illustrates the history and development of DDC through its various editions in a nutshell. To make the setting he traces the classification history prior to 1876. Not a single milepost in the history of DDC has been dropped out in this brief description.

Governance and the revision of the DDC, the theme in the second chapter, show how DDC is "lengthening shadow" of its creator. It is to be noted here that this theme is not generally dealt with in most of the DDC guide-books. Complete understanding of the DDC demands an understanding of its formal and organized revision policy.

Chapter three introduces the four volumes of the text of DDC. Especially, volumes 2 and 3, the schedules of classes have been introduced with all necessary details in this chapter.

Basic plan and structure of the DDC is described in chapter four. This chapter sets the DDC in the general context of classification theory. Expertise of the author is reflected through lucid clarifications of notation, main classes, chain and array structures and, hospitality.

Chapter five makes DDC users familiar with the subject analysis and locating class numbers. Common problems faced by classifiers in determining subjects and assigning numbers are addressed here. When a document covers a number of facets classifiers find it problematic to assign a class number. In such occasions there should be a method to decide which aspect to be represented and which to be ignored. Addressing this problem chapter six deals with tables and rules for precedence of classes in DDC. It covers all basic components of the issue in a pragmatic way.

Chapters 7-12 deal with number building techniques of DDC. Basic devices and the use of Tables are discussed with suitable examples in these chapters. These, as a whole, show the author's dexterity in the presentation of complex devices in clear terms.

Dealing with multi-topical subjects has been discussed in detail in chapter thirteen. Examples and clarifications given here are sufficient enough to understand the zigzag process of multiple synthesis.

Relative index of DDC is one of its unique features. All terms used in the schedules and tables are arranged in it general to the specific order and it is an alphabetical key to the content of the DDC. Chapter fourteen gives a comprehensive and analytical description of the relative index of DDC. It is a manual to operate it

The appendices are a valuable addition to the book. These contain a broad chronology of the DDC, table of DDC editors, revision tutorial and answers to the questions in the revision tutorial. Students themselves are able to test their understanding on virtually every aspect of the DDC through the revision tutorial.

Glossary at the end of the book defines and describes the important terms used in the DDC in simple and clear terms. The author has given a list of references and further reading; It is indeed a valuable collection of latest publications on DDC. The index provides quick and easy access to the major terms and concepts contained in the book.

Physically the book is a handy publication printed on quality paper. The publisher is famous for books in the field of library science, information and knowledge management.

Satija's work is more than a guide- book. It is a thoughtfully prepared reference work on DDC as well. Therefore, it is highly useful to students of DDC, librarians and library teachers.

