

Information System for NGO Libraries in Pakistan: A Proposed Model for Organizing the Grey Literature

Syed Attaullah Shah
and
Humera Ilhaq*

Introduction

In recent years, especially in developed countries, various systems have been created to advance the management and organization of grey literature. Such systems use the latest communications technology and electronic and digital resources, and have developed huge networking systems like SIGLE (System for Information on Grey Literature) and NTIS (National Technical Information Service) to distribute and manage grey literature. Because of the scarcity of a global standardized organization system for grey literature and often limited access to computer technology, however, awareness of existence and access to grey literature is still seriously lacking, particularly in developing countries. Based on a survey of selected Pakistani NGOs from various sectors, this study proposes a new model. This paper explains the current usage patterns of grey literature in Pakistani organizations, then assesses their needs and resources for grey literature, and finally recommends a new, standardized model for organizing grey literature in the developing world.

NGOs in Pakistan

NGOs are facing new challenges in developing countries due to their increasing numbers, sizes, and interventions. NGOs in Pakistan, for example, are involved in social development and have continually learned from the experiences of the world in the field of crises, disasters, and other events management. These NGOs are playing a vital role in managing, creating, and disseminating information, ideas, and solutions for rehabilitation and social development. They serve as an active partner of the Government and International agencies. For the production and dissemination of current information, grey literature is the most suitable, efficient, and cost effective medium for both NGOs and Community Based Organization's (CBOs). Four major factors are involved in the changing usage of grey material by NGOs: (1) Environmental, political, and economic

* Syed Attaullah Shah, Faculty of Health Sciences Library, Aga Khan University, Pakistan (Email: syed.attaullah@aku.edu)
Humera Ilhaq, Faculty of Health Sciences Library, Aga Khan University, Pakistan

changes in the world; (2) the increase in the number of NGOs; (3) increased funding for NGOs; and (4) technology influences. These are the driving forces in the changes and development of literature and information systems.

As technology, especially computer technology, has been introduced to and commonly used by NGOs in Pakistan, more grey literature is being prepared and produced than ever before. Individual authors of grey literature and their organizations have become, essentially, their own publishers. They produce different types and forms of literature and disseminate it by new and efficient methods.

A number of NGOs in Pakistan are working for advocacy, policy issues, social welfare, community developments, rehabilitation, and capacity building while others provide basic services in education, health, water, sanitation, and other fields of social and community based development. Still other NGOs play an important role in increasing awareness of population and environment issues, and human, legal, women and children rights. Combined, these NGOs also provide a significant source for employment. The NGOs in Pakistan are small to medium sized and focus mostly on social welfare work.

According to an Asia Development Bank study, “there are less than 100 effective NGOs [in Pakistan] but there are thousands of generally weak CBOs that are working.” Many small NGOs and CBOs look towards the government and other agencies for funding, direction, and mentorship. The majority of mid-level NGOs view the government and other agencies as collaborators and facilitators. These small to mid-sized NGOs are really needy and deserve for more finance, education, organization, planning, and management. The NGOs involved in community-based projects also need to improve linkages, unification and coverage of their work by documentation, proper literature organization, and a good dissemination mechanism.

Survey of Pakistani NGOs

Two different questionnaires, one for the NGO management or publication department and the other for the library in-charge, were prepared. Eight mid-level NGOs and twelve small NGOs and CBOs were selected for the survey.

We conducted a survey of selected (A) NGOs’ Management and of the (B) Library In-Charges to determine the following:

(A) Creation of Grey Literature from the NGO’s Perspective:

1. Why does your organization produce grey literature (benefits)?
2. Who uses your grey literature?
3. How do you produce your grey literature (procedure)?
4. What types of grey literature do you create/publish?
5. How do you disseminate the literature?

(B) Organization, Preservation, and Dissemination of Grey Literature:

1. Is the Librarian qualified or some non-professional is looking after the library?
2. Who uses the library? How many daily library users?
3. What types and approximately how much grey literature are available in the library?
4. How do you keep and organize the printed and electronic grey material? (Information about the grey material on website is not required)
 - a. Do you use any standard literature classification and cataloguing schemes? Or do you use an in-house scheme?
 - b. How do you disseminate grey literature or bibliographic information about the grey literature?
 - c. Do you feel need of an appropriate and simple system to organize and disseminate grey literature for your library?

Creation of Grey Literature

Librarians—especially those in developing countries with limited budgets, technology, and expertise—have always faced problems organizing and disseminating grey literature. NGOs in developed locations create their literature electronically, for example, on websites, CDs, floppy disks, and audio and video cassettes. Very few NGOs in Pakistan have developed websites and therefore cannot upload catalogues and bibliographies of their literature; the bulk of grey literature is in printed form. Keeping in mind the limits of internet access in Pakistan, information available on the internet will not be part of our proposed system. The proposed system will organize only literature which has physical format including print, CD-ROM, DVD, audio and video cassette, and floppy disk, etc.

Most of the NGOs have similar motivations for creating grey material. According to the survey results, reports are the primary means to highlight NGO performance and progress, and are prepared mainly for government and funding agencies. The reports are also major instruments for promoting their projects and plans in the NGO world. These are also helpful for the researchers and professional workers who do similar chores for transmission of knowledge. The training material for health and other social sector workers and for people to create awareness regarding any current health, environment, disastrous and other developmental issues and their solutions is generated by NGOs. Some NGOs also use electronic media for example CDs, Floppies Audio and Video Cassettes, Internet etc... For demonstration they also use charts, transparencies, and electronic slide show etc... during training programs. The other type of grey literature describes the mission, operation, research plan, programs and projects,

institutional repository, mechanism and system of the organization, and to share their knowledge and experiences.

Many NGOs, however, do not publish their reports in journals or books because it is too expensive or because they prefer to make information immediately public rather than to wait through the publication process. (Another factor: many NGOs are not equipped with a skilled workforce to deal with the literature according to the appropriate standards of a recognized journal or book publisher.) Indeed, one of the main objectives of NGOs is to disseminate information quickly, effectively, and efficiently. To submit literature for peer-review and publication, to a great extent, undermines these goals. NGOs create and produce, often mid-project and before completion, pre-refereed versions of grey literature for rapid dissemination. After achieving a particular target, some NGOs will compile all the relevant literature as a comprehensive report or other document. There are, however, some affluent NGOs that value their reputation and consider it beneficial to publish on both commercial and non-commercial bases.

In Pakistan, a larger number of NGOs and CBOs have limited finance, skill, technology, and human resources. As a result, these groups create their literature in-house. The few NGOs that have computers use them to generate information, photocopy printouts, and to disseminate pre-published material. Most NGOs, however, do not have computers and use typewriters. Many NGOs and CBOs in rural areas of Pakistan prepare hand written documents in English, Urdu (the national language of Pakistan), and other local languages. Sometimes they distribute their literature as micro-photocopies on oversized paper. Regardless of the production method, these are primary documents written by people who live with and have the same frame of mind as the local population. Such documents are therefore significant and quite useful in understanding the actual state of human and social development, humanitarian needs, problems, and many other issues facing rural and urban areas in a developing country such as Pakistan.

Dissemination of Documents

In general, NGOs have mailing lists of government departments, funding agencies, sister organizations, other NGOs, CBOs, and individuals. They also provide their literature, as requested, to other NGOs and CBOs, researchers, students, individuals who are involved in relevant projects, reporters, and sometimes business organizations. NGOs distribute and disseminate documents in full or in part and also distribute bibliographical information and document lists. NGOs with more technology send information via e-mail and upload the information to their websites. Computer technology is sparse in Pakistan and documents are most commonly circulated through the postal service. Many

Information System for NGO Libraries in Pakistan

NGOs will have literature on hand for individuals to collect during a visit. Some actively deliver their literature to locations in the city and to nearby areas. They also disseminate the catalog and list of their literature with other documents or separately. Some affluent NGOs are seeking new collaborative associations and maintaining partners' directories and have also developed computerized and manual networks among the similar NGOs, other organizations, and individuals. Some NGOs advertise their documents and sell them through the book vendors. NGOs that have their own libraries will keep multiple copies of their documents on the shelf for library users.

Almost all mid-level NGOs have their small libraries in some form or shape. Some have a separate library with qualified librarian(s) while others keep a publication collection with another department's room (full room or portion of a room) with non-qualified librarian. Normally these libraries are supervised by a full time or part time staff member of another department of the organization. In some cases the librarians must take a three-month certificate course in Library Science. In others, the staff already has some level of training in Library Science. Whereas some support NGOs provide resources and training for capacity building to intermediary NGOs, and also provide, technical help to the libraries and librarians.

Libraries

Estimating the amount of available grey literature in a given library is very complicated. Most librarians would hardly be able to approximate the amount of grey literature in their collections. The difficulty is in recording and tracking many documents of very few pages on continuous bases.

Most of the small NGO and CBO libraries, especially in rural areas, are working without a standard classification and cataloging scheme. Furthermore, they do not use computers in the library. Some librarians record their documents in a register, and then use the same register to issue and return the document. Some mid-level NGOs maintain their libraries in a professional manner with the help of a professional librarian, library systems, and computer technology. CDS/ISIS (a type of library software) is popular in NGOs' libraries in Pakistan. Other locally developed library software is also being used in NGO libraries. Some NGOs are using spreadsheets or Access database to record and retrieve the library data including grey literature.

More organized and better maintained libraries use library software mostly for book or journals, not grey literature. There is no proper system in NGO libraries to organize grey literature. According to the survey of NGO libraries, most of the librarians are helpless against the organization of grey literature. In libraries where some sort of classification scheme is being used for books, the

grey literature is being organized in a strange manner. If the document looks like a book in size and shape then the library would treat it as one; it would issue a call number and keep it with the books.

There were some commonly used methods to keep and organized the grey literature found in the result of survey:

1. The grey literature was treated like a book and shelved with books according to subject.
2. The grey literature was kept in horizontal file boxes (like a briefcase) with or without a cover, subject, theme wise, or in alphabetical order.
3. They used vertical boxes to order grey literature by subject, theme, or in alphabetical order. They pasted alphabetical tags or numbers on both types of boxes. In some libraries the boxes were kept without any tags.
4. The bulky literature which can stand on the shelves, they kept them separately subject wise, or serial wise and the other (slim or not so sturdy) literature was stood on the shelves with the help of book supporters (by self allotted serial numbers or according to the broad number of DDC).
5. In some libraries we found grey literature (especially the newsletters) on display shelves in alphabetical order by the title or by organization.
6. In some libraries they tried to sort the literature according to its type and format.
7. Most popular system was found where they piled the literature in a corner without any proper storage and no proper procedure was followed to organize them as well. Most of the libraries, especially the smaller libraries, simply made piles of grey literature on shelves, tables, or floor. In most cases, important material was kept separately at conveniently accessible place.
8. A large amount of the literature was found in the offices of Heads of the NGOs, or in the rooms of other senior officers. Normally, when they get the material they make piles on their tables and in other places of the room instead of sending it to the library. In response to the question, Why don't you send the material to the library?, one respondent answered, "We seniors share these materials amongst us." They believe it more difficult to search out the literature in the library because of the lack of a proper system. They did not care that the literature would be out of reach of other library users.

Information System for NGO Libraries in Pakistan

Some libraries are using broad classification Scheme of DDC. They labeled boxes and documents with broad subject numbers, for example, 330 for Economics. Some libraries used in-house classification schemes. They assigned alphabets, numbers, or both to a subject or to an organization/NGO and labeled them on the boxes. Most of the librarians were unable to understand all types of grey literature. They were unable to identify and sort out the grey literature separately according to its type, format, and subject.

The Proposed Grey Material Management System will make it easy for low-skill library staff to identify and sort the grey material.

Due to lack of proper scheme and proper management, Pakistani NGO librarians are having little success with grey literature. They are struggling with proper organization, retrieval, and dissemination. Exacerbating the mismanagement of grey literature is the scarcity of skilled library workforce. For the above mentioned reasons, most of the important literature is hidden and out of the general users' reach.

We asked librarians, library in-charges, or any senior NGO officer, "Is there any need of a proper and simple system to manage the grey literature, by which you can organize the literature and could retrieve and disseminate it professionally and efficiently?" Most of them were excited and wanted to know about the system. Some NGOs asked if they would be able to run the system without any qualified librarian. Some asked when do we get such a system and how much would it cost?

Proposed System to Organize the Grey Literature

Most classification schemes are based on subjects. In the culture of Pakistani NGOs, where the scarcity of the expert librarians has become a serious issue, few could understand all the subjects of NGO-related literature and classify them, which is why the subject classification scheme is not more suitable for grey literature. The grey literature consists of many types and formats of material, and these formats, from organization and searching point of view, themselves have their own identification and importance. Usually the users of grey literature come to the library for a particular document rather than to browse. A document may have more than one subject and sub-heading, and reports normally cover many projects and themes of the organization. So it is not an easy task to determine the subject simply by looking at the document, nor is it easy to categorize each document under a single, proper subject. (It is, however, far more simple and easy to categorize documents by format.) It is also difficult to assign a proper classification number for searching purposes for a large number of documents by their subjects which would be very complicated for less com-

petent librarians. This is problematic because subjects and subject headings remain very important from user's perspective.

According to our indigenous perspective and culture and because of problems in managing the grey literature due to variety in work nature of NGOs in Pakistan, there is an imperative need for a new and innovative Literature Management and Classification system for the easy access and availability of the grey literature. To address the problems faced by professional and non-professional librarians in managing the grey literature, we have devised a grey literature management system; a separate classification scheme that simplifies locating, facilitates maintenance and retrieval of the literature.

Keeping in view the importance of subject of a document, we propose that the first document be sorted and assigned a broad Subject Heading, then classified according to the literature type and format. To make searching simple and efficient, the important keywords of the document will be recorded with the citation record, which allows for easy search and retrieval. In our proposed system, after assigning a broad subject heading, the literature should be classified according to its format.

Some Major Subjects of NGOs in Pakistan

According to our proposed scheme, the literature will be classified according to major Subject Heading. In Pakistan the majority of NGOs deal with limited number of subjects. A list of commonly used subject areas with their abbreviations is given below. These abbreviations are very simple based on the sound of full name of subject. The Librarians who need to change the abbreviations of the subjects heading or want to add some more subjects in this list can change and add according to the requirements. By sorting the literature according to subject areas, the vertical boxes of one subject can be kept together at one place.

Subject of NGOs

CBOs	CBO
Child Abuse & Child Labor	Child
Civil Society	Civil
Community Developments	Com
Micro Credits	Credit
Economics	Econ

Information System for NGO Libraries in Pakistan

Education & Training	Edu
Environment	Env
Public & Community Health	Health
Human Rights	Human
NGO Management & Capacity Building	NGO
Rehabilitation	Rehab
Rural Development	Rural
Social Developments	Social
Urban Development	Urban
Water & Sanitation	Water
Women Issues	Women

After labeling by subject heading (see table above), the material will be sorted and categorized according to its format. For instance, “R” for Reports “R-Anl” for Annual Reports, “P” for papers, “CON” for Conference and “P-CON” for conference papers. Classification should be chronologically ordered. For example, if a library receives three Annual Reports from different organizations, the 1st Annual Report will be classified and treated as No. 1, the annual report received after that should be allotted No. 2, and so on (the label would read: R-Anl-1, R-Anl-2, R-Anl-3, etc.). The year of publication should also be the part of the Call Number that is written under the call number. After including the subject abbreviation the complete call number will be as follows:

1st Line: Subject Heading.

2nd Line: Format and number.

3rd Line: Publication year.

The example below uses three Annual Reports from different environmental organizations received in 2005.

Call Numbers

Env R-Anl-1 2005

Env R-Anl-2 2005

Env R-Anl-3 2005

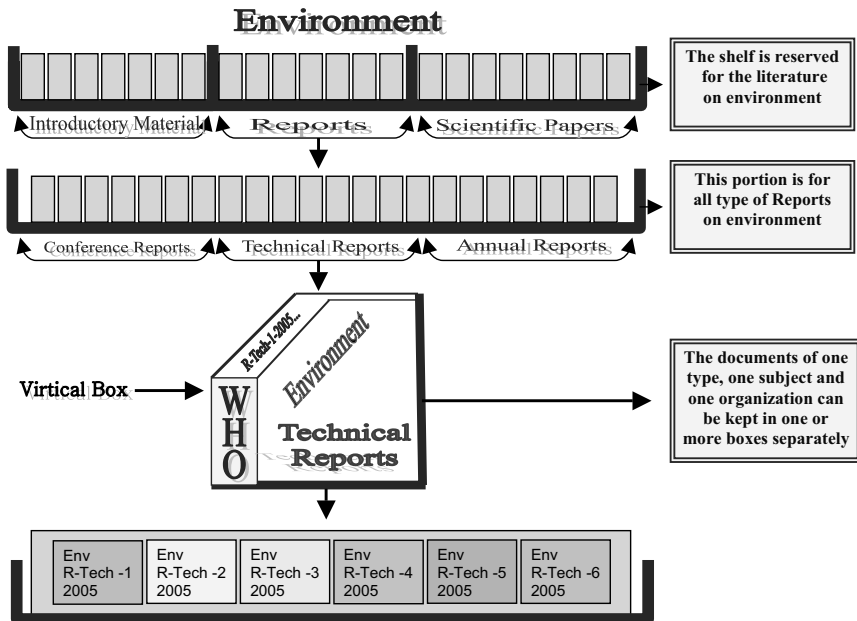
Classification Scheme for Non-Book Printed Material			
LITERATURE TYPE	LOCATION	LITERATURE TYPE	LOCATION
ABSTRACT		MANUSCRIPTS	MNS
Papers	AB-P		
Research Papers	AB-RES	PHOTOGRAPHS/ IMAGES	PHT
Technical Papers	AB-TECH		
		POSTERS	POS
ATLASES/MAPS	ATLS		
		PRESENTATIONS/ TRANSPARENCIES	PRT
BIOGRAPHIES	BIOG		
		PROCEEDINGS/ PAPERS/PROG.	
BIBLIOGRAPHIES	BIB	Conferences	P-CON
		Workshops	P-WKS
CURRICULUM/ SYLLABUS	CLM	Seminars	P-SEM
		Symposiums	P-SYM
DIRECTORIES/ DICTIONARIES	DIR	Research	P-RES
		Collective Work	P-CW
GUIDES/TUTORIALS/ UPDATES	GTU		
		REPORTS	R
HANDBOOKS	HBK	Annual Reports	R- ANL
		Conference Reports	R- CON
INTERVIEWS	INTW	Research Reports	R-RES
		Seminar Reports	R-SEM
INTRODUCTORY MATERIALS		Symposium Reports	R-SYM
Booklets	BKLT	Technical Reports	R-TECH
Brochures	BROC	Project Reports	R-PROJ
Flyers	FLY	Program Reports	R-PROG
Leaflets	LFT	General Reports	R-GEN
Pamphlets	PMP		
Prospectus	PROS	REVIEWS	REW
LECTURES/NOTES	LNT	SURVEYS & STATISTICS	SS
LOOSE MATERIALS	LM	TRAINING MANUAL	TM
MANUALS	MNL	YEAR BOOK	YB

Physical Location/Arrangement

1. Portions in the shelves will be assigned and reserved according to prescribed subjects in alphabetical order for placing in vertical boxes. For example, all literature on public health will be grouped together; literature on environment will be at another; etc. In this manner, all other literature can be kept according to the subject.
2. Within a given subject, boxes will be sub-organized, alphabetically, according to the literature format. Conference reports and technical papers, for instance, on a particular subject will be grouped separately under that subject heading, with conference reports preceding technical papers.
3. After the classification of literature. The literature will automatically be sorted according to its format and one type of literature should be kept separately in a logical order. For example, by this method all the conference reports will be kept together and arranged according to the call number and the year. The earliest year's report will be placed first and after completion of one year, the next/following year will start. Therefore, all the Conference Reports of 2005 will be placed together at one place, and will follow reports of 2004, 2003, etc.
4. If a reasonable number of any one type of document of an organization/publisher is available in the library, that organization's documents can be placed in a separate box. For example, all the technical papers of one organization can be kept in a separate box.
5. Oversized and thick literature can be placed outside the vertical boxes beside them.
6. This is a multi-approach literature access scheme. The user can search the literature by different approaches, i.e., by organization, call number, format of literature, and by major subject headings. The user can also retrieve the required document without taking help of computer search or catalogue cards.

Brief summary of the document organization scheme: First, a separate portion in the shelves will be allotted to major subjects. Within each subject each type (format) of literature will be placed separately. In each type of literature, the arrangement of the documents will be according to the call number. If the number of one type of document of one organization has increased then a separate box can be allocated for that.

Shelving Arrangement Chart



Why Vertical Boxes:

Unlike books, grey literature is normally thin and difficult to stand on the shelves and the labeling of tag of call number on its spine and read it at searching time is also a big problem.

There are certain advantages in using the vertical boxes:

1. Proper Storage: Vertical boxes are most suitable to keep documents in upright position.
2. Facilitates organization; all documents of one type can be kept together.
3. Identification: Tags with call numbers, organization, format of literature, and subject heading can be placed on the spine of the vertical box.
4. Protection and Transport: Users may take out one or more boxes of one type of required literature from the shelf and read it at a different location such as a reading room.
5. Usage and Neatness: Vertical boxes are easy to handle and re-shelve and also give a neat look because of similarity in shape, size, and color.

Accession Register

Ours is like all other accession registers used for library books. Only column of “Material Type” will be added. It is up to the user’s requirements, if the user feels the need of more columns they can be added. Any unnecessary columns can be deleted as well from the following table.

Entry Date	Acc. No.	Author	Title	Publisher/ Organization	Publication Year	Publication Place	Illustrations	Material Type	Call No.	Remarks
------------	----------	--------	-------	-------------------------	------------------	-------------------	---------------	---------------	----------	---------

Register for Call Numbers

This is an important register. We assign call numbers according to the register’s sequence and mention its accession number before each call number. A separate page will be allotted for each type or format of the literature, i.e., one separate page for Annual Reports, another for Technical Reports, and so on. Each page will consist of only two columns. The first column will be for the call numbers, the second for accession numbers. The first document will be allotted first call number and first accession number. The second document of the same format will be assigned the next call number. The accession number may be jumped a few numbers ahead, because other documents may be added between call numbers 1 and 2.

For example, first annual report received in 2005, we allotted it the call number R-Anl-1-2005 and its accession number was 100. Before receiving the second annual report, the library has entered ten other documents the accession register and allotted up to 110 numbers and call numbers accordingly. Now we will enter the second annual report in the accession register. Then we will have to assign it the accession number 111 and the call number will be R-Anl-2-2005. It means that the increase of numbers in call numbers will be the one part and the accession numbers will be the total of all call numbers. For this purpose spread sheet and any small software to maintain and auto generate call and accession number can be used.

Environment

Call. No.	Accession No.
R-Anl-1-2005	100
R-Anl-2-2005	111
R-Anl-3-2005	132

Cataloguing

A separate worksheet is used for Grey Material data entries. It consists of two screens of basic and necessary information of grey literature citation. The document can be retrieved by any entry of the screen. This retrieval and searching can be done by software or online or both. The following are two screen prints of the data entry sheets:

Data Entry Sheet -1

20/04/06 ----- Enter/Edit Non-Book Material ----- atta

+-----+ -----+	
Call No.	Active [Y]
Material Type	
ISBN No.	
Title	
Author	Co-author [N]
Volume	Number
Publisher	
Series	
Language [ENG	
Subject	
Pages	
C/W/S/R Title	
C/W/S/R Date	C/W/S/R Duration
C/W/S/R Venue	
C/W/S/R Organized by 1.	2.
Keywords	

Data Entry Sheet - 2

20/04/06 ----- Enter/Edit Non Book Copy Material ----- atta

Accession No.	0
Active	[Y]
Call No.	
Entry Date	
Donor	
Status	
Location	
Remarks	

Digital Organization:

Software:

Librarians who are already using library software CDS/ISIS or any other software for books and journals can use a separate worksheet for grey literature. Through call numbers, subject and type of literature searches can be made easy. Keywords search can be used to obtain highly effective search results.

SDI Service

The problems of the required literature have already been discussed. To provide quick information with full citation of newly-arrived literature to the users and to give information of single literature at one time in the age of information explosion, a low cost with simple technology a system of information dissemination can be introduced. This system has already been introduced at Faculty of Health Sciences Library of Aga Khan University and is running successfully.

Few changes in existing software were required for this system. First the customer's fields of interest or subject preferences and e-mail addresses were taken through a customer survey and feed them in the system. As the newly received document is entered in the system the software matches the preferred subject of the customers with document's subject from its call number. The system automatically generates an e-mail and sends it to the user with full citation and other necessary information of the document. If a user registers with many NGO libraries of same or different subjects, he/she can be apprised of newly received documents in these NGO collection.

Networking

With fewer resources, a simple networking system will be more suitable for persons with average computer skills.

Proposal to Create an Electronic Network among NGOs' libraries in Pakistan

The proposed information sharing system will be software-based through NGO websites (Internet Server). Backend software will be working through a server. At the front end will be the website of the Network. The website will collect and disseminate the data. Through this website and backend software, an option will be created which will give access to members to feed and retrieve (search) information, obtaining membership and request for articles (ILL, and Document

Delivery Service), and a software tutorial. This system will give access to bibliographic information (citation) of books, journals, and other printed and electronic material. Such information could be fed and retrieved by any member library. The Software will also manage membership record and will send Email automatically to acquire document from other member library.

A Plan for Computerization of Pakistani Health Libraries—In a Few Days

In Pakistan, hundreds of NGO libraries are neither automated nor computerized. Instead they are run manually due to the scarcity of finance, difficult in availability of good library software, and computer skills and shyness.

This proposed networking system can solve the problem of all Pakistani NGO libraries. They may computerize their libraries within a few days without extra financial burden and computer expertise. These libraries have very small data in their libraries which can be uploaded with in few days. For this purpose it will not be necessary for a member library that it should be computerized before acquiring the membership. To join the network one PC and Internet connection will be required. The member libraries will be able to download the software with a simple tutorial. They may feed their library's data in the software offline (without connecting to the main database), and whenever they want they could upload their data into the main database by connecting to network via internet. They can also download their own data and the data of other libraries.

No need to be connected with Internet

In this system there will be an option to upload and download the data of all End user clients. There will be a facility available that the data from a member library can be feed without connecting the Internet and main server. If a library is not able to purchase more internet hours for data feeding and retrieving, the member library will be able to download all the data available on server by connecting the net, and they can search and feed the data offline. After a certain period they can download and upload to update their database.

Already Computerized libraries will have no problem to be a part of the network:

The libraries that are already computerized and have compatible software for their library will be able to be a member. They can merge their data and download the network's data by the software, or they can run both software parallel in one computer.

Information System for NGO Libraries in Pakistan

End User as a Server:

An End user may become a Server and may extend connections to other library users inside or outside the library.

Sub-Networks:

The NGOs of same field and same nature, for example NGOs working on health may evolve sub-net work for sharing their resources.

Through the proposed information system, the NGOs of Pakistan will be encouraged to share to create, use and maintain an information system at the least possible cost, while the existing information resources and literature of NGOs will come within the range of users, that same can be circulated as National NGOs Data. This network can be extended to outside the country.

References:

- Asian Development Bank. 2006. A Study of NGOs Pakistan. <http://www.adb.org/NGOs/docs/NGOPakistan.pdf> (accessed April 4, 2006).
- Farace, D. J. 1997. Rise of the Phoenix: A Review of New Forms and Exploitations of Grey Literature. *Publishing Research Quarterly* 13 (1997): 68–77. <http://libsnap.dom.edu/Reserves/Removed%20Reserves/LIS742Lifshin/LIS742LifshinRise.htm> (accessed February 24, 2006).
- Feather, J. and Sturges, P. 2003. *International Encyclopedia of Information and Library Science*. 2nd ed. London: Routledge, 210.
- Ferl, T. E. and Millsap, L. 1991. *Subject Cataloging: A How-To-Do-It Workbook*. New York: Neal-Schuman.
- Forbes, C. 2006. C⁴ : CHRIS's Cataloguing Classification Concept. <http://www.hs.unp.ac.za/im/forbes.pdf> (accessed April 2, 2006).
- . Information Management: Paper A; Organizing for information management. <http://www.hs.unp.ac.za/im/forbes.pdf> (accessed April 2, 2006).
- Lambert, S., B. Matthews, and C. Jones. Grey literature, Institutional Repositories and the Organizational Context. Council for the Central Laboratory of the Research Councils, <http://epubs.cclrc.ac.uk/bitstream/820/GL7-CCLRC-paper.pdf>. accessed April 2, 2006)
- Schöpfel, J., and C. Stock. Citation analysis and Grey Literature: Stakeholders in the Grey Circuit. http://www.greynet.org/images/GL6_Page_55.pdf (accessed April 2, 2006).
- Mason, Moya K. Grey Literature: Its History, Definition, Acquisition, and Cataloguing. <http://www.moyak.com/researcher/resume/papers/var7mkmkw.html> (accessed April 18, 2006).
- Pearce, Michael, ed. 1992. *Non-standard Collection Management*. Aldershot: Ashgate.
- Weintraub, I. The Role of Grey Literature in the Sciences. <http://library.brooklyn.cuny.edu/access/greyliter.htm> (accessed April 2, 2006).