Abstract

The Internet was introduced in Nepal in 1994, and was quickly recognised as an exciting means of accessing information resources, appropriate for technologically advanced society. This paper identifies and characterizes Nepal's digital library initiatives in science and technology, research, education, literature, humanities history and politics. Donor agencies funding support and government policy was critical for the implementation of Nepal’s digital libraries. Institutions with a strong background in advanced technology had an advantage when entering digital library field. Cooperative projects have also had significant impact.

1 Introduction

The rapid development of information and telecommunication technologies, especially the emergence of the Internet and www, is gradually innovating every facet of human life. The main reason being the Internet popular is the content part. It is the valuable quality and easily accessible information from the vast amount of information that has made Internet meaningful and is going deeper and deeper into human life. Among the diversity of Internet content, the digital library (DL) plays an important role in the acquisition and dissemination of information. To ensure the benefit of ICTs for developmental professionals Nepal is going to build National Information Technology Centre (NITC) by the end of year 2004. At present stage, the achievements of ICTs include:

(i) All government schools of capital are provided free Internet access by Nepal Telecommunication (NTC) through dial-up connection;

(ii) Internet applications like distance learning, the digital library, electronic commerce have been developing.

1.1 Country Background

The kingdom of Nepal is situated in South Asia, one of the Southern slopes of the Himalaya mountain range, which separates tropical India form the semi-arid central Asian plateau. Nepal is an elongated, rectangular country, with an area of approximately 147’181 square kilometers, about the same as Greece or Bangladesh. Geopolitically, the nation lies between India and China, and is land locked. Administratively, Nepal is divided into five development regions and 75 districts. The lowest administrative division is the Village Development Committee (VDC) of which there are 3996.

1.2 The Internet in Nepal

The Internet in Nepal was first introduced in 1994 through dial-up connection (via uucp) and Fidonet Mercantile Office System (MOS) became the first Internet Service Provider (ISP) in mid-July 1995, when it established an on-line International link via NTC to Singapore Telecom. World Link and Computerland followed a year later. In January 2000, there were eleven licensed ISPs. It has been estimated that Internet subscribers was 9000 at January 2000.
2 Digital Library Initiatives

The digital library initiatives can be roughly classified into 5 categories and will be elaborated in sequence:

(i) Preservation of manuscripts;
(ii) Establishment of locally generated digital libraries;
(iii) Provision of foreign research digital libraries;
(iv) Telecentres;
(v) Integration of conventional and digital libraries.

2.1 Preservation of Manuscripts

Preserving manuscripts in their digital format has aroused international attention. The digitalization work of manuscripts was done with German help. On February 16, 1970 an agreement between Nepal and German Research council was signed as a Nepal-German Manuscript Preservation Project (NGMPP). The first photographic unit of the NGMPP was established in the National Archives in Kathmandu in 1970. From 1970-1975 a team of Nepalese and German scholars filmed the entire manuscript collection of the National Archives; Nepalese specialists were responsible for developing and reproducing the microfilms. The NGMPP has microfilms more than 180,000 manuscripts containing some five million folios. Approximately one fifth of these are Tibetan manuscripts, and the rest fall under the Indological section. Although the majority of the texts in the Indological section works in sanskrit, this section also includes works in other languages-in particular, Nepali and Newari. The filmed textual material includes, in addition to literature representing the traditional fields of Indological and Tibe tolological studies, such as bellettristic, religious and philosophical literature, also more than 47,000 documents in Sanskrit, Newari, Nepali and Tibetan.

In 1987, a new section of the NGMPP was setup at the Institute of Indian and Tibetan studies at the University of Hemburg (Germany) which has mainly been responsible for the preparation of preliminary title list of the texts in the indological section. The preparation of a preliminary title list of the texts in the Indological section. The preparation of basic Catalogue records for the Tibetan manuscripts and block-prints began in 1994. The “Preliminary list of Microfilmed by the NGMP: Part I (excluding Tibetan material and historical (Documents))” has been published in June 2003.

2.2 Establishment of Locally Generated Digital Libraries

The considerable amount of information produced in Nepal related to its own development is not consistently collected or made available to its users. The majority of development programs and R&D projects report their results in very limited quantities. These documents which accurately chart Nepal’s development efforts experiences and priorities need to be preserved. Since these documents are not indexed in international journals and are not available through commercial channel, as a whole, much valuable, locally produced information goes uncaptured and is irretrievable.

The various tools used for creating local digital libraries are:

a. WWW in HTML format.
b. Database
c. CD-ROM
A brief description of each one is given below:

a. WWW in HTML format

WWW in HTML format is the most widely used tool for generating information in digital format. Up to 2003, 2500 np domain name has been registered. The main use of HTML format is limited to creating website of an organization.

b. Database

Database is another tool used for creating information in digital form. The most widely used software package (99%) for creating database is CDS/ISIS. A survey was being made at Kathmandu valley (capital of Nepal) and found that out of 60 libraries, 50 libraries are using computer for bibliographic database. The bibliographic database can be classified into two classes.

a. In-house bibliographic database; and
b. On-line bibliographic database.

a. In-house Computerized Bibliographic Database

Out of 60 Libraries 55 libraries are creating in-house bibliographic database. The types of publications used for storing information in databases are publications, books, reports, thesis etc. Among them Integrated Centre for Mountaineering Development (ICIMOD) has been able to create highest records of 20,000 followed by Central Library, Tribhuvan university 15,000, Central Forest Library 12,000, Royal Nepal Academy of Science and Technology (RONAST) 11,000, Health Learning Material Centre (HLMC), Institute of Medicine, Tribhuvan University (TU) (10,000).

b. On-line Database in Website

Five organizations namely, ICIMOD, HLMC, TU, Central Library, TU, Nepal Health Research Council, and Health Literature Library and Information service (HELLIS), WHO has searchable on-line database in the web.

c. CD-ROM

Since all the organizations in Nepal, does not have access to Internet and most of the organizations connect the Internet through dial-up connection. So, the alternative means of accessing resources in digital form is CD-ROM. Organizations like UNICEF, Nepal, HealthNet Nepal has produced their information in CD-ROM also.

3 Establishment of Locally Generated Digital Libraries

WWW is also used for providing popular Nepalese newspapers, journals and scientific journals. In this section, presentation is being made of three efforts.

HealthNet Nepal

HealthNet Nepal is a collaborative project of Institute of Medicine, Tribhuvan University and SatelLife, Boston, USA. HealthNet Nepal was established in 1994. It mainly focuses on computer based ICTs. HealthNet Nepal collects processes and provides access to a wide range of locally generated information resources, such as thesis, report, statistical data and database. One example is the Annotated Health Science bibliography of Nepal, which is now available in Internet from the period 1950.
HealthNet Nepal also provides space in its server to host on-line medical journals published from Nepal. PDF and HTML formats are used for putting journals in web in full text. Along with journals, thesis submitted by post graduate medical students, reports and statistics are also included in web related to Nepal.

**Mercantile Communications Pvt. Ltd**

Online news services about Nepal are provided by nepalnews.com (www.nepalnews.com). This website provides news, events, polls, discussions, forums about and from Nepal.

**International Network for the Availability of Scientific Publications (INASP), UK**

Programme for enhancement of Research Information (PERI), INASP, UK under the programme for enhancement of Research Information (PERI), is planning to provide support for publishers of scientific journals of Nepal. The activities include supporting online service to bring greater visibility of journals in full text.

**4 Provision of Foreign Research Digital Libraries**

In this section, focus is made of support from international organizations that has made digital libraries with international research content available to the research and academic community in Nepal. For clearing the term, ‘electronic resources’ are used to denote digital libraries with international research content.

**4.1 Information Environment in Nepal**

The concept of modern information and communication technology to provide diverse information services within the field of Health Sciences is a comparatively recent development in Nepal. The Institute of Medicine Library of Tribhuvan University with the largest collection of materials in the health sector was founded in 1972 and most parent institutes of current health libraries were established within the last ten years.

In Nepal, the development priorities are to solve the problems associated with basic needs of better health, education, food production, clothing, housing and security as identified in the government’s basic needs programme. The provision of funds for basic collections of information has been minimal. This has been most unfortunate since it is through well organised information services that the ideas may be generated that will provide answers to the problems with which Nepal is now confronted. Other nations have passed through or are passing through the stage in which Nepal is now situated and the concepts and solutions they achieved are readily available in the world’s varied information banks.

It can be understood that in a nation, which has recently emerged into the modern world of Science and Technology, there is no tradition of using technical know-how as in developed nations. There is however, a new and growing community of information users as Nepalese scholars return from abroad and join various Government Departments and other agencies and more are qualifying each year. In addition, graduates and post-graduates from Medical Colleges of Nepal are joining the stream regularly every year. It will be apparent that the professional community is growing every year.

Developments have been taking place in Nepal but until recently much of the associated work and information background were provided by international experts who presented solutions to problems and not the methodological information base so important for the solution to the next problem. External experts will continue to operate in Nepal but now they are joined by a national group of scientific and technological workers whose information needs are placing pressures upon the existing health information system.
Information is required about a wide range of health subjects i.e. water borne diseases, tropical diseases and respiratory diseases, etc. and at all levels from the technical to the administrative and political. The accent is on current information, which is not necessarily to be found in the traditional book media of libraries but within journals and reports.

To cope with this situation, academic libraries started providing electronic resources to their patrons. However, electronic resources have the following problems:

a. expensive subscription fees;
b. complicated licensed agreements; and

c. scarce technical staff for solving network and computer related problems.

These issues could not be solved by any single library in least developed countries, international organizations like WHO, Geneva, INASP, UK and SatelLife, USA started thinking about the possibility of providing electronic resources cost effectively. Attempting to achieve its goal, the following international organizations has adopted the strategies under the following programmes:

4.2 Health Inter Network Access to Research Initiative (HINARI)

HINARI is a new initiative to provide free or nearly free access to the major journals in biomedical and related social sciences, to public institutions in developing countries. Starting in Jan 2002 with over 2000 journals from the world’s leading biomedical publishers. HINARI provides access to some 1500 journals from 6 major publishers: Blackwell, Elsevier Science, the Harcourt worldwide STM Group, Walters Klumer International Health & Science, Springer Verlag and John Wiley, and will continue for at least 3 years. Twenty-two additional publishers joined in May 2002, bringing the total number of journals to over 2000.

4.3 INASP, UK

INASP is a cooperation network of partners. It’s mission is to enhance the flow of information within and between countries, especially those with less developed systems of publication and dissemination. Under the PERI program, it provides access to scientific and scholarly information through electronic means. Includes over 10,700 full text online journals, current awareness databases. In Nepal, it was started from July 2003. The publishers are Blackwell EBSCO, Emrald, Cochrane Library and Oxford University Press.

4.4 SatelLife Inc, USA

Over the past fourteen years, SatelLife is involved in developing solution to the everyday information needs of health professionals working in communities where AIDS and malaria are common place, but medical journals and the Internet are an unaffordable luxury. It provides network facilities and information resources through its project HealthNet. HealthNet Neal was established in 1995. It provides access to locally generated information resources, electronic conferences and website hosting. SatelLife provides its information content through 40 peer-reviewed journals through HealthNet News compiled weekly, Health News, AIDS compiled bi-monthly, and HealthNet News-Community Health complied monthly. Apart from this it provides disease specific links and 5 discussion groups.

5 Telecentres

In developing countries, a strategy has been adopted for applying ICTs to alleviate poverty through telecentres. One of the major objective of telecentre is meeting information needs of rural community in repackaged format with emphasis is local language. Two rural telecentres projects are under way in Nepal. One small-scale project and the other is a national pilot project involving around 15 rural
telecentres. To meet the information needs, rural community’s information needs were identified through a study commissioned by UNDP Nepal on the feasibility of online services in rural areas. The information needs are related to crops, fertilizers, plant diseases, veterinary services, human diseases, family planning, terrorism, sanitation techniques.

6 Integration of Conventional and Digital Libraries

In Nepal, only a portion of the library has been digitized, so the information needs have to be fulfilled in a diversity of formats and from local and remote resources. The electronic resources will continuously play an important role for assisting users to obtain the needed information that is not owned by the library itself. The challenge is bringing a range of technologies and services together for creating an interlibrary loan and document delivery service meeting the requirement of users and the librarians.

7 Conclusion

This article gives an overview of digital initiatives currently executed in Nepal. Regarding the preservation of Nepalese manuscript, individual organizations endeavour, the NGMPP supported by government played major role.

The digital library has become a powerful tool in accessing information resources. The effort of HealthNet Nepal, and Mercantile Communication Pvt. Ltd, in making available local information resources in digital format is appreciable.

To supplement the local resources, the steps taken by international organizations like HINARI, WHO; INASP, UK and SatelLife, USA has helped Nepal to join the recent emerging Information society.

In Nepal, though digital library is emerging as a powerful tool, however the conventional library also exist side by side. So a policy has to be adopted to integrate the conventional and digital resources for meeting information needs of users in a better way.

References


