CHAPTER 1: INTRODUCTION

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1.1 INTRODUCTION:

With the advent of more and more powerful information technology tools, the role of information specialists become complicated, because of his diversified information requirements and new ways of information dissemination. As libraries are an integral part of the Information Super highway, we must develop a library that fit the "World of Tomorrow". By the invention of different networks critical milestones have been reached, but we information professionals are at an important juncture.

The library world is changing rapidly. Few years back we had libraries with books and other material in paper form. Later on, we switched over to computerized library and then automated libraries. At the same time we use to procure study material in digital format, so in present scenario we have different scenes in our single library, i.e. library with study material in traditional paper form, library with study material in digital form or paperless library and we use to manage it side by side separately.

1.2 PROBLEM:

Open learning system provides education and training to all those persons, who are unable to learn full time while being present physically. Majority of persons has their own limitation resulting them to join open learning system. As an open learner rarely comes to the campus, it becomes essential to provide study material at his end. Now a days open learning centers are providing such facilities efficiently. But this study material cannot fulfill their curiosities and information needs. So they need some other related or reference material. In practice it is not feasible to provide library material to these open learners at their end. This problem becomes more serious, when student becomes a researcher. For providing some solution of the above-mentioned problem, the present study investigates the ways of the web enabling of such library material for a distant learner.
1.3 SCOPE OF THE STUDY:
The present study is confined to investigate various ways of:

- Designing a good library web page and
- Digitizing library documents

For this purpose it is required to survey the basic requirements of open learners of some of the prominent Indian Open Universities. It is also required to find out various techniques for Web Designing and Digitization and to find out the most appropriate out of them.

While analyzing the information requirements of Open Learners, it is decided to visit Indira Gandhi National Open University, New Delhi; Yashavantrao Chavan Maharashtra Open University, Nashik; Kota Open University, Kota and Rajarsi Purshottam Das Tandon Open University, Allahabad.

The main thrust of this study is to make library documents available through web in open learning system.

1.4 OBJECTIVE OF THE STUDY:
The objectives of the present research work may be enumerated as under:

- To review the existing status of open learning system.
- To identify the information needs of beneficiaries of open learning system.
- To investigate on the conversion of Library material in web enabled form.
• To identify the basic S/W and H/W requirements.

• To investigate on the library accessible through Web.

1.5 LITERATURE SURVEY:

The emergence of new information handling technologies have significantly influenced the basic nature of conventional paper based libraries and have created a need for a new type of library systems as polymedia, electronic, digital, and virtual libraries. (Barker, 1996). The popularity of e-Books has grown since their inception in the early 1980s due to their usefulness in distributing large volumes of interactive multimedia information. (Barker, 1996). Barker (1996) has reported the basic nature of eBooks, the philosophy underlying their use, the basic taxonomy and description of various techniques involved in their design and fabrication. A comprehensive media strategy allows information to be moved from one medium to another as the needs of its users change. (Barker, 1998). Landoni et al (1993) reported two innovative forms of eBooks as hyperbooks and visual books that are based on the book metaphor and the environments, in which such eBooks are produced. Roberts (1999) describes how an academic library provides dynamic access to ever changing serials holdings. Roberts (1999) again describes a web based database containing ready reference sources, unlike many library sites in which reference sources are hard coded as links on a web page. Ervin (2000) describes how the Jackson library at the University of North Carolina converted a directory of online newspapers from static HTML files to a Microsoft Access database and then delivers the requested information using Active Server Page technology. A good web based tutorial on Common Gateway Interface is designed by Selena Sol (1998).

The Z39.50 Information retrieval Protocol has provided the facilities for automating information systems and bibliographic databases. Traditional libraries face space and financial restrictions, since the amount of holdings rapidly expand with the cost of individual publications while library budgets are continuously decreased. (Luther, 1999).
The phrase "Electronic Document Delivery System" (EDD Systems) self-evidently implies the supply and reproduction electronically of the kind of information usually provided in the form of print on paper. The three generations of EDD systems can currently be distinguished: systems based on online ordering, non-integrated supply-driven image-based systems, and integrated stand-alone image-based system. (Roes and Dijkstra, 1994). Critical EDD system technologies are not yet adequately developed and most publishers still publish printed materials more than any other material. The basic reasons of delay are examined by Berghel. (Berghel, 1999). Some of the EDD systems are NAILDD project (Barrett and Jackson, 1993) and ARIADNE system (Roes and Dijkstra, 1994).

Metadata, a fundamental role of digital content, has now become an important part of the global information construction in planning, processing, restoring and managing. (Vellucci, 2000). Vellucci has also listed a number of metadata sets. (Vellucci, 2000). There are more than 20 different types of international standard metadata existing among the domains for different requirements. (El-Sherbini, 2001). It is ideal to establish a higher level of super metadata for all metadata interoperability. It facilitates the success in integration, and each metadata keeps its on character. (Chilvers and Feather, 1998).

ALA affirms the right of all persons to access electronic information in its interpretation of the library bill of Rights by stating that "Electronic information services and networks provided directly or indirectly by the library should be equally, readily, and equitably accessible to all library users. (American Library Association, 2000).

The World Wide Web has rapidly become the most popular internet resource, combining hypertext and multimedia to provide a huge network of educational, governmental, and commercial sources. (Burgstahler et al, 1997). WWW is one of the tools that uses the hypertext and allows computers to link information in new ways different from a sequential reading approach, to make it easy to retrieve and add information from different computer sources through the use of computer links. (Berners
Lee et al, 1992). Web will bring forth a better democracy within the USA by returning the power to the people. (Meeks, 1997). The number of users from medium income group joining the web is higher then the number of users from higher income group. (Pitkow, 1996). One of the lacuna of internet is that of inadequate search facilities with the lack of a high level query language for locating, filtering and presenting WWW information. (Foo and Lim, 1997). It is difficult to locate a desired web site by majority of users. (Pitkow, 1996). In case of web site maintenance and assurance of information accuracy is difficult. (Foo and Lim, 1997). Many systems allows software developers to attach programs which are executed upon access to a web page. It is called webware "simply visiting a web page may cause you to unknowingly down load and run a program written by someone you don’t know and don’t trust. (Felton, 1997).

The World Wide Web currently has a huge amount of data with particularly no classification information and this makes it extremely difficult to handle data/information effectively. (Marchiori, 1998). The task of knowledge management can be accomplished by adding to web objects a metadata classification which will assist search engines and web based digital libraries to properly classify and structure the information on the WWW. Bartlett (1999) points out that accessible web sites allow web search engines to more effectively index web pages. (Marchiori, 1998). Bartlett (1999) also states that the web is not exclusively visual medium, but rather an information medium; one way to convey that information is visual. He goes on to comment that Hypertext Markup Language (HTML) is designed to display content independent of a specific means of representation and that web page creators who only design visual pages are missing out on the power of HTML. Accessible web page also allow the optimum use of screen reading software and other adaptive computer equipment. (Coombs, 2000; Cunningham and Coombs, 1997). People with visual disabilities may experience low vision, functional vision, color blindness or blindness and have problem seeing computer screens and using keyboards. (Cunningham and Coombs, 1997). Persons with physical or motor disabilities may often be unable to use standard computer input and output devices. (Cunningham and Coombs, 1997). Web designers may reduce barriers to access by implementing a simple design
that is easily viewed and incorporating clear on screen and keyboard navigation. (Coombs, 2000). Those with learning disabilities may have visual perception problems and/or aural processing difficulties. (Cunningham and Coombs, 1997).

1.6 HYPOTHESIS:

To achieve the specified objectives of the present study, following hypothesis have been formulated:

1. It is possible to convert library documents in digital format.

2. It is possible to make available the digitally stored documents through web.

3. Web enabled library material can efficiently and effectively fulfill the library needs of a open learner.

1.7 METHODOLOGY:

This investigation has been carried out using personal computer equipped with various tools and techniques for digitization and web page designing. Major steps involved in the methodology are given as under:

Step 1       Literature Search

Step 2       To conduct a survey for identifying the information requirements of open learners.

Step 3       Finding out appropriate technique for designing library web page.

Step 4       Finding out appropriate technique for digitization of documents.

Step 5       Investigation on the enabling of digitized documents on web.

During the course of selection of the area of study / research, an extensive search
of literature had been carried out. Various bibliographic tools had been used.

At the time of starting research in the predefined area, various related areas of study have been sorted out. Related literate on these sub areas have been searched to make the vision clear. Some of these major areas are:

Digitisation,

Web Designing Technology,

Web Server Technology,

Language for Web Page Designing,

Distance Education,

Open Learning System in India, etc.

In the second stage it is tried to identify the actual learning conditions and information requirements of Open Learners. It was done by designing and distributing questionnaire for open learners. During this stage, it is required to go through direct interaction with the related persons. For this a survey was conducted to interview open learners and distance educators.

In the next stage, various tools and techniques have been examined to search best out of them for the purpose of Digitisation and Designing of Library Portal. For this purpose investigations have been carried out in the computer laboratories of Bundelkhand University, Jhansi and Information and Library Network (INFLIBNET), Ahmedabad.

In the fifth and final stage all of the investigation has been combined and grouped together to conceptualise an ideal library having digitised material and accessible through World Wide Web.