Chapter I

INTRODUCTION

In college, students establish the intellectual foundations for their careers, and it is when they have the freedom to explore paths their lives might take. It is the rare student who comes to us with a clear life map already in hand. We can put choices in front of students, but we must do so in an academically structured manner.

It is important to teach students a body of knowledge—the "facts" of a discipline. One cannot pursue any profession without understanding the principles of it. Good universities find a balance where students are free to form their long view of the world while at the same time acquiring the knowledge and skills to pursue a rewarding profession. We fail when we force students to choose a college experience where they must pick one or the other.

1.1 College library

Every college must have a good library. It occupies (college library) a prominent position in the college campus. It is the pulsing heart of the college. Therefore the function of the college library is important one. It is threefold.

- First it serves the college community
- Its duty towards the alumnus
- It must become a positive influence in society for the expansion of knowledge and helping men and women in their quest after truth.

In India the UGC provided generous funds for purchase of reference books and text books as well as building grants and sponsored the College Humanities and Social sciences Programme (COHSSIP) and College Science Improvement Programme (COSIP). With the result that the class room teaching is now supplemented by library usage, through purchase of books on latest teaching methods provide exhaustive knowledge of the subject to the students.

**1.2 Objectives of College Library**

The following are the objectives of the college library.

i) To promote the records of human knowledge and to keep them upto date in accordance with the growing needs and requirements of the today and tomorrow.

ii) To remained faculty members of the varied opportunities for using library resources in teaching.

iii) To provide individual and group guidance to the readers in the use of library resources with practical demonstration on how to procure information.

iv) To provide necessary resources for staffs and students.

v) To assist teaching staff in organizing the synthetic methods of teaching.
vi) To bring documents, students and the academics together under environments which stimulate reading for pleasure, self-realization, personal growth and development, and the cultivation of intellectual excellence.

1.3 User Study

‘User study’ means a study of the user of information. The kind of information required by the user, the ways and means used for searching the required information, the use of the information obtained, the satisfaction / dissatisfaction arising from the use of information obtained, the flow of information and the relationship of the user with the system (information provider) – all come under the purview of user studies. “User study” is the means for systematic examination of the characteristics and behavior of the users of the systems and services. ‘User study’ is directly linked to the effectiveness (performance) of library and information services as they aim at satisfaction of the user needs.

1.4 Information Needs

Generally, information needs arise out of situations pertaining to a specific task that is associated with one or more of the work roles planned by the professional. However, an “information need” is not constant and can be influenced by a number of intervening factors. Drawing from the current literature, variables that influence or shape the information needs of professionals include (in random order) individual demographics (age, profession, specialization, career stage, geographical location), context (situation specific need, internally or externally
prompted), frequency (recurring need or new), predictability (anticipated need or unexpected), importance (degrees or urgency), and complexity (easily resolved or difficult).

Studies on the information seeking or professional indicate that the nature of the specific profession, and factors such as age, career stage, area of specialization, and geographic local, can influence the formulation of the information need. In an important study of earth science engineers, Gralewksa-Vickery has found that the range of information that engineers required in their work varies with career stage, with junior engineers having a narrower range than those in more senior positions. Furthermore, with respect to geographic location studies of the information seeking behaviors of lawyers have noted that the legal jurisdiction in which they practice has a considerable impact upon their information requirements.

While information needs may be influenced by factors relating to the individual as above, there are also other more general characteristics of information needs that enter into the equation. Two examples of these general factors are frequency and complexity. With respect to frequency, David Bresnick has noted that lawyers have recurring information needs relating to previous cases handled by their own firm, which can result in wasting time searching for internal documents if the firm does not have a good records management system in place. Regarding complexity, Osheroff et.al have conducted an analysis of the questions posed by physicians and showed that their information needs vary considerably in complexity, ranging from direct questions that could be answered using a patient’s
record to a complex question that requires information of patient data, hospital records, and medical knowledge.

Finally, it should be pointed out that each factor in the information need component of the model exists on a continuum of intensity with others in a complex fashion. For instance, an information need could be unforeseen but relatively unimportant and its solution not needed immediately, while on the other hand, an unexpected need could be of great importance and extreme urgency. The level of complexity, the degree of importance and urgency, and whether the information need is anticipated or unexpected together will affect the information seeking activity undertaken.

1.5 History and Development Electronic Resources

Over the past few years, a number of techniques about related standards have been developed which allow documents to be created and distributed in electronic form. The e-resources on magnetic and optical media has a vast impact on the collections of engineering college libraries. Electronic publishing has lead to new era of communications and information sharing. It creates opportunities for users as well as authors and publishers. Many of the electronic books or electronic publisher’s web site freely permit and encourage the readers to provide feedback on works, often directly to the author rather to the publisher. Nevertheless, users may establish their own accounts, charge services to credit cards or to pay by pre-arranged method and have requested to deliver material directly to them by fax, e-mail, etc. Today, libraries of all kinds have been spending larger and larger shares
of their budgets to adopt or gain access to electronic resources from publishers and vendors. This is the fact that e-resources have enabled libraries to improve services in a variety of ways. First, most e-resources come equipped with powerful search and retrieval tools that allow users to perform literature searches more effectively and efficiently. Moreover, since most relevant e-resources are now available through the web, users can have desktop access to them, 24 hours a day. There are several forms and types of electronic resources which are available on the internet, some of the popular ones that are gaining ground are the electronic journals, standards, technical specifications, reports, patents, full text articles, trade reports and hosts of other document sources. Also the printed editions of scholarly journals are available on the web. The publishers of journals are themselves providing services like contents, abstracts of articles, full texts, before the actual printed edition is put on the stands. Majority of this kind of service providers are those publishers who have several journal publications to their credit.

1.6 Concept of Electronic Resources

Due to the developments taking place in information and communication technology, a variety of information sources are appearing besides print media. In contemporary librarianship the acquisition and subscription of electronic resources became important and unavoidable. These resources have advantages over print format which encourages the libraries to move towards digital and electronic sources. The library professionals too accepted and recognized the importance of potential use of these resources for which computers and computer technology is
mandatory. The beginnings of electronic resources can be traced back to 1960’s with the development of Machine Readable catalogue format. Almost at the same time the bibliographic databases became available. The development of computers also encouraged the use of electronic resources in libraries. In 1990’s, the World Wide Web was created by Tin Berners Lee, this facility encouraged the use of electronic resources in libraries. Consequently web based electronic resources and their use begins in the mid 1990’s. Libraries offered Web-based catalogues, bibliographic and full-text databases, electronic journals and eventually electronic books through the web. Patrons no longer had to go to the library to do a significant amount of their research. To satisfy the five laws, as enunciated by Ranganathan, the use of electronic resources through which a variety of information services should be offered. The developments of technology during 20th century are convenient, economical and users friendly. As a result the libraries are coming forward to move towards electronic resources.

1.7 Definition of Electronic Resources

An electronic resource is defined as a resource which requires computer access or any electronic product that delivers a collection of data, be it text referring to full text bases, electronic journals, image collections other multimedia products and numerical, graphical or time based, as a commercially available title that has been published with an aim to being marketed. These may be delivered on CD-Rom, on tape, via internet and so on.
According to AACR2, 2005 Update, an electronic resources is: “material (data and/or program(s)) encoded for manipulation by a computerized device. This material may require the use of a peripheral directly connected to a computerized device (e.g., CD-ROM drive) or a connection to a computer network (e.g., the internet).” This definition does include electronic resources that do not require the use of a computer, for example, music compact discs and videodiscs.

1.8 Features of Electronic Resources

E-resources have some distinct features which differentiate them from traditional resources. E-resources on the internet are further distinct by the nature of the information on the net itself.

(a) High compact storage;
(b) Ease of reproduction, multiplication, manipulation and transmutation;
(c) Contents can be very easily detached from its media or container;
(d) Ease of migration of contents from one medium to another;
(e) Ease of transmission, communication and storage;
(f) Hypertext and multimedia;
(g) Seamless integration of print and electronic resources;
(h) Sophisticated and multipronged searches through keywords, free text, Boolean operators, less numbers and natural languages processing;
(i) Wall less libraries leading to the vision of multimedia global virtual library (MGVL) inaugurating an era of “death of distance”; and
(j) Convergence of technology, which is getting more powerful each day.
1.9 Advantages of Electronic Resources

For the following advantages the E-resources are procured:

- Easy usability,
- Readability,
- Budgetary aspects and speedy accessibility,
- Easy back file access.

In addition to the above, the following are the added advantages of e-resources:

- Multi-access: A networked product can provide multiple points of access (in the campus) at multiple points in time (24X7X365) and to multiple simultaneous users.
- Speedy retrieval: An e-resource is lot quicker to browse, to extract and to integrate the information into other material and to cross refer between various publications.
- Functional aspects: e-resources will allow the users to approach the publication in order to analyze its content in various new ways and techniques by click of the mouse on search button.
- Content analysis: The E-resources contain a vast amount of information, but more importantly in a mixed format mode i.e. images, video, audio and animation which could not be replicated in print.
- Consortia mode: The E-resources can be subscribed in a consortia format too, thus cutting down the costs but reaping the same benefits. eg. INDEST Consortia for Engineering College Libraries.

- Interactively: Articles/issues/chapters can be read, commented by the readers, amended quickly and greater feedback can be given through the web.

- Hypertext: Format can be used and links to related articles, or other web sites, & URLs for individual articles and email alerts when latest issue/edition is uploaded can be got.

- Virtual reality: Advantages taken on the web is to add value by using animation, virtual reality and interactive physical & mathematical charts.

- Flexibility: Resources are evolved quickly i.e. they are not bound to any format, printer, and distribution network.

1.10 Sources of Electronic Resources

The following are the sources for accessing E-resources in Arts and science college libraries:

- Online Catalogue
- Machine readable catalogue
- Online Public access catalogue
- Web-Based catalogue
- Bibliographic databases
- CD-Rom databases
- Web based databases
• On-line databases
• Electronic serial/Journals
• Electronic books/thesis
• E-Learning resources (Video lectures)
• Consortia

1.11 Open Access Electronic Resources

Open access resources can be defined as resources that use a funding model that does not charge readers or their institutions for access. According to Budapest Open Access Initiative (BOAI), the term ‘open access’ refers to its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, link to the full texts of these articles, use them for indexing, pass them as data to software, use them for any other lawful purpose, without financial, legal or technical barriers. The only constraint on reproduction and distribution and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.

Some popular Open access journal sites:

1.11.1 Directory of Open Access Journal (DOAJ)

(http://www.doaj.org/doaj?func=loadTempl&templ=about&uiLanguage=en)

The Directory of Open Access Journal is a one stop shop for users to access several scientific and scholarly journals and known for its visibility and ease of use.

1.11.2 High Wire Press

(http://highwire.stanford.edu/lists/freeart.dtl)
High Wire Press is the largest archive of free full-text science articles. This is accessing in the online publication of 2,120,047 free-text articles and 6,730,410 total articles. There are 18 sites with free trial periods, and 49 completely free sites. 282 sites have free back issues, and 1271 sites have pay per view facility.

1.11.3 First Monday

(http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/index)

First Monday is one of the first openly accessible, peer-reviewed e-journal web site. Since its start in May 1996, First Monday has published 1,119 papers in 179 issues, written by 1,473 different authors and also nine special issues. First Monday is indexed in Communication Abstracts, computer & Communications Security Abstracts, DoIS, eGranary Digital Library, INSPEC, Information Science & technology Abstracts, LISA, PAIS and other services.

1.11.4 MERLOT Journal of Online Learning and Teaching

(http://jolt.merlot.org/)

MERLOT is a free and open resource, designed primarily for faculty and students of higher education. The MERLOT Journal of Online Learning and Teaching (JOLT) is a peer-reviewed, open access, online publication addressing the scholarly use of multimedia resources in online education. JOLT is published quarterly in March, June, September, and December. JOLT welcomes papers on all aspects of online learning and teaching. Topics may include learning theory and the
use of multimedia to improve online learning, instructional design theory and application, online learning and teaching initiatives, etc.

1.11.5 Google scholar

(http://scholar.google.com/intl/en/scholar/about.html)

Google scholar is a source for scholar is a source for scholarly literature which facilitates searching across many discipline and sources of articles, theses, books, abstracts and court opinions from academic publishers, professional societies, online repositories, universities and other web sites.

1.11.6 Directory of ABC Chemistry:

(http://www.abc.chemistry.bsu.by/current/fulltext.htm)

This web site offers free full-text peer-reviewed in Chemistry, some for free of cost and others by payment. It also provides extensive free supplements t printed versions of papers, chemistry-related subject articles, English language versions of other language articles.

1.11.7 Bentham Open Access

(http://www/benthamscience.com/open/?gclid=CNOvi-Wb_KkCFZ76wodUSxXw)

Bentham Open Access publishers 230 peer-reviewed open access journals. These free-to-view online journals cover all major disciplines of science, technology, medicine and social sciences.
1.12 Statement of the problem

A Knowledge society is characterized by the introduction of new business models in many different domains. Education is one of the domains undergoing massive change. In this knowledge society, information technology, in particular, allows for newer learning scenarios where technology plays a major role in sharing and dissemination of knowledge. Online and Offline e-resources have also become an essential resource in learning process. It is to be mentioned that libraries in developing countries like India are investing increasingly large amounts of their financial and human resources in electronic sources, ranging from e-content, such as online journals, e-books and data files, software such as word processing, presentation and citation management packages. As with print resources, it is vitally important that libraries educate their users to take advantage of these useful, expensive and sometime complicated sources and tools. On the other hand, Government has also been constantly taking initiatives to strengthen R&D activities in higher educational institutions in the country encouraging the use of e-resources in the teaching learning process. Under these circumstances, It is the responsibility of the library to ensure that valuable e-resources are optimally utilized by the users or not.
In view of the above, the researcher intended to undertake this topic on “Use of Information and Communication Technology based resources and services by the Faculty Members and PG Students of Arts and Science Colleges in Cuddalore District, Tamil Nadu: A Survey”. The study aims to ascertain the availability of e-resources, awareness of e-resources available in library, utilization of e-resources and usefulness of e-resources in teaching and learning process among the users of Arts and Science Colleges in Cuddalore District, Tamil Nadu.