1.1 Background

Education plays a pivotal role in the development of society. The universities are the apex bodies in higher education system. “Dissemination of knowledge in a university is achieved through (i) teaching, (ii) publication, and (iii) extension programmes.”\(^1\) The convergence of Information and Communication Technologies (ICTs) coupled with globalization and liberalization have changed the methodologies of teaching, learning and research at every level of education. The document of National Policy on Education (1986), has rightly observed that “In the context of unprecedented explosion of knowledge, higher education has to become dynamic as never before, constantly entering uncharted areas.”\(^2\) Higher education institutions are overrunning state and national boundaries. The university is no more a place where teacher and students have face-to-face interaction. The role of the teacher has been redefined from teacher to facilitator. Physical distances are no more important with new ICTs. Emphasis on life-long learning, easy access to information, interaction with knowledge, availability of powerful multimedia learning tools, has changed educational scenario.

The vast developments in higher education and research with an impetus of knowledge-economy has resulted in not only the exponential growth of information but also has paved way for the emergence of interdisciplinary and multidisciplinary subjects. The world is passing through unprecedented competency to establish supremacy over
knowledge. The nascent information thus generated has to reach and utilized by the academic community before it becomes obsolete. The developments in ICTs in general and Internet and World Wide Web in particular have revolutionised the way of information flow from its generation to use. The academic community needs to have quick access to the exhaustive information, generated world-wide, to be more effective and efficient in its academic endeavour. But the amount of information and various formats in which it is published is beyond any one individual or institutional reach to achieve control over world’s information even in ones own field of specialization. It is here the university library extends its support to the academic community engaged in higher pursuit of knowledge by adjusting itself to the demanding needs of the knowledge society driven by ICTs.

1.1.1 University Library

“The role of libraries in providing widespread and inclusive access to knowledge is widely acknowledged. In today’s context, libraries have to play two distinct roles - to serve as a knowledge centre of information and be a local gateway to national and global knowledge centre of information. In order to achieve this goal, existing libraries must modernize their collection, services and facilities, become more proactive and collaborate with other institutions, agencies and NGOs in order to develop a community-based information system.”
The Radhakrishnan Commission (1948) on University Education in India aptly observed that “The library is the heart of the university’s work, directly so as regards its research work, and indirectly as regards its educational work. Scientific research needs a library as well as its laboratories while for humanistic research, the library is both the library and laboratory in one.” Library has thus become the heart and soul of university system.

Collection of information resources is an important activity of any library. Collection development is a complex process that includes assessment of user information needs, evaluation of present collection, designing collection development policy, procurement of information sources and planning for resource sharing. The university library takes into account the information needs of users - teachers, students, researchers, etc. - and develops the collection of all types of information sources in whichever format they are published.

Till recently, the libraries were procuring information sources in print form and organizing them physically in the libraries. The developments in ICTs have changed the world of information industry. The adoption of electronic technology in production of information sources has made collection development in libraries a more complex process. The developments in Internet services in general and WWW in particular have changed the face of library and information services in higher education and research. The libraries are providing access to the information through computer networks, which
have broken down the barriers of space and time. Hence, the shift is from information ownership model of librarianship to the information access model. The information behaviour of library users and their expectations of library and information services have also changed.

Hewitson (2002) is of the opinion that “Changes in technology in recent years have dramatically altered how information is accessed, stored and disseminated. Whereas information provision in academic libraries was previously based upon the collection of physical library materials, it is now increasingly the case that academic libraries are moving their collections into the virtual arena. With new advances in new technology opening up access to information on a local, regional, national and international basis, academic staff are now faced with a multitude of information sources available from their desktops.”

The present day university libraries striving hard to possess electronic information resources and provide services on that basis through networks to the users wherever they are.

1.1.2 Electronic Information Resources and Services

Electronic information resources offer unique advantages: compact storage, rapid retrieval and delivery, interactivity and flexibility in transfer of information. These sources provide access to current information as these are updated frequently. Often, the sources such as full-text databases, e-journals, e-books including reference sources
(dictionaries, encyclopedias, directories, handbooks, atlas, etc.), text-archives, OPACs, image collections, multimedia products, collections of numerical data, etc., provide links to related information to the users in their field of interest. The university libraries have realized the importance of electronic information resources to fulfill the ever-growing and dynamic needs of their new generation of users, who give more importance to instant access to information than its authenticity and authoritativeness. They are Internet savvy.

Internet is considered as the treasure house of information which provides access to information resources both free and fee-based. Internet has become ubiquitous all over the world, and university libraries are not exception to it. University Grants Commission established INFLIBNET Centre in the year 1991, to help the university libraries in India not only to automate their house-keeping operations but also to establish campus-wide networks in the universities.

The consortia activities, such as UGC-Infonet, INDEST and others are gaining popularity among higher education and professional institutes in India. By making use of all these electronic infrastructure and resources, university libraries provide different kinds of information services to their users such as: information alert services, newsgroups, virtual reference service, retrospective search service, document delivery service, Web-based instructions (FAQs), translation service, user education, institutional repository and portal services.
University libraries can also alert their users of information resources procured recently, forthcoming conferences and seminars, important information appeared in newspapers, newsletters, etc. Personalised services are provided to the individual users through passing the information of their interest to their desktops. When the libraries introduce new resources and services all the users are informed through the list services. The university libraries create news groups and post them for wider dissemination among the users online to obtain their participation, suggestions, feedback, etc., regarding various resources and services offered by them.

University libraries offer virtual reference services to their users through e-mail, instant messages (chatting) and over telecommunication. General guidance in making use of resources and services are provided through FAQs.

University libraries have made provision for automated circulation, reservation and recommendation for procurement of information sources, and access to the OPAC which services save the time of the academic staff. A well-designed library web site serves as a gateway for the resources of the library and promotes the use of information sources and services. The information sources which are more important are mounted on the library website in order to bring to the notice of the users, and their instant access.

Through robust and reliable campus network, university libraries provide attractive services to the academic staff. Information about the subscription of online
sources and information sources available through consortia is passed on to the academic staff’s desk-top. The CD-ROM server connected to the campus LAN provides access to the information sources available on CD-ROMs and DVD-ROMs at the door-steps of the academic staff.

User education is another important service provided by a modern library. University libraries arrange training programmes, workshops, special lectures, audio-visual presentations, publish brochures, handbooks, and tutorials on computer and Internet fundamentals, searching CD-ROM, DVD-ROM, Internet, consortia-based resources, institutional repositories, etc.

1.2 Statement of the Problem

Every institution engaged in pursuit of higher education and research is trying to achieve academic excellence. Every educational institute has realized the need for automation of their libraries. The university libraries in Karnataka are spending lakhs of rupees every year for the purpose of library automation and procurement of electronic resources. The UGC is also providing financial assistance for this purpose. Further, the UGC, under its UGC-Infonet programme, is providing access to e-journals to almost all the Indian university libraries for the benefit of academic community.
There seems to be no definite answer for several research questions like - the strategy being followed by the university libraries in Karnataka with regard to collection of electronic information resources other than those made available under UGC-Infonet consortium, the awareness of electronic information resources and services available in university libraries by the academic staff and such other questions. A review of the published literature in the selected area of study reveals that, no systematic study has been carried out either on the availability of ICT infrastructure, and e-resources and services, or on their awareness and use by the users of university libraries of Karnataka. And hence, the problem of the study is stated as: “COLLECTION OF ELECTRONIC INFORMATION SOURCES AND SERVICES IN KARNATAKA STATE UNIVERSITY LIBRARIES, AND THEIR AWARENESS AND USE BY THE ACADEMIC STAFF: A STUDY.”

1.3 Significance of the Study

From the dawn of last quarter of the 20th century, especially from the mid 1990s, Indian university libraries have made provision for electronic information resources and services. The libraries are equipped with number of computers, Internet connectivity, E-mail facility, Local Area Network (LAN), subscription of online resources such as e-journals, e-books and e-databases, access to consortia-based resources (such as UGC-Infonet), and CD-ROM databases. The automation of their traditional services like acquisition, cataloguing, circulation, serials control, etc., have been carried out. The
main intention of making provision for electronic information resources and services was
to improve the quality of library services for the benefit of academic community. The
university libraries in Karnataka are also making considerable efforts in this direction.
The large amount of public money is being invested for this purpose. Though the
university libraries are non-profit organizations, there is a need to study the extent to
which the electronic resource-based services have added value to the higher education
and research.

There is an urgent need to know the strength and weakness of the collection of
electronic information resources and services available in Karnataka State university
libraries. It is also because that, this study would reveal the problems faced by the library
professionals in the process of establishing electronic library services. This study
becomes an eye opener with regard to the existing situation of collection of electronic
information resources and services in university libraries of Karnataka. The present
study will help to know the problems encountered by the university librarians in the
procurement of electronic information resources and services in university libraries of
Karnataka. It is also important to know the extent to which the academic staff are aware
of the electronic information resources and services, and also to what extent they use
them for their academic activities.

The knowledge of these important aspects will have an immense value for planning
and development of information services in university libraries of Karnataka. Moreover,
no systematic study has been undertaken to understand the collection of electronic information resources and services in university libraries of Karnataka on one hand, and their awareness and use by the academic staff on the other. Hence, the present study is undertaken to make a humble beginning to understand the issues raised above.

1.4 Objectives of the Study

The objectives of the present study are as follows:

a) To assess the ICT infrastructure available in the university libraries of Karnataka.

b) To know the status of library automation in the university libraries of Karnataka.

c) To find out the collection of electronic information sources in the university libraries of Karnataka.

d) To find out the provision of electronic information services made by the university libraries of Karnataka.

e) To find out the awareness and use of the electronic information sources by the academic staff working in the universities of Karnataka.

f) To find out the awareness and use of the electronic information services by the academic staff working in the universities of Karnataka.

g) To find out the academic staff’s awareness and participation in user education programmes conducted by the university libraries of Karnataka.
1.5 Hypotheses and Research Issues

The following hypotheses have been drawn for the present study.

1) There is a direct relation between the support extended by the UGC under its INFLIBNET and UGC-Infonet Programmes and the development of e-culture in the university libraries of Karnataka.

2) There is an association between the gender of the academic staff and the awareness and use of e-resources.

3) There is an association between the designation of the academic staff and the awareness and use of e-resources.

4) There is an association between the subject background of the academic staff and the awareness and use of e-resources.

5) There is an association between the computer training background of the academic staff and the awareness and use of e-resources.

6) The academic staff who have Internet facility at their department chambers and at homes use the Internet more frequently than those who use it at commercial centres.

The present study has several research issues and the important ones are given below:
a) Is there any definite strategy being followed by the university libraries in Karnataka with regard to the collection of electronic information resources other than those made available under UGC-Infonet consortium?

b) Whether the academic staff make use of the information offered by their university libraries through e-resources and services for teaching, research, publishing research papers and books, participating in seminars and conferences, and for guiding their P.G. students and research students to make the best use of them for their academic endeavours?

c) What do the academic staff expect from their university libraries to create awareness and use of electronic information resources and services available in their university libraries?

1.6 Limitations of the Study

The study is restricted to the academic staff working in post-graduate departments of the selected universities in Karnataka State.

The scope of the study area is limited to Karnataka State. Only six universities which are included in the Karnataka State Universities Act, 2000 have been taken into consideration for the purpose of the present study. The names of the universities which are included in the present study are: Bangalore University with its headquarters at Bangalore, Gulbarga University with its headquarters at Gulbarga, Karnataka University
with its headquarters at Dharwad, Kuvempu University with its headquarters at Shankaraghatta near Shimoga, Mangalore University with its headquarters at Konaje near Mangalore, and University of Mysore with its headquarters at Mysore.

All other universities, viz., Agriculture, Medical, Technical, Kannada and deemed universities in Karnataka state are excluded from this study.

Tumkur University, Tumkur and Women’s University, Bijapur are also excluded from this study.

1.7 Methodology

The survey method has been adopted for the present study. The detailed description of the methodology followed for the present study is presented in Chapter 3.

1.8 The Definition of the Concepts

The definition of the concepts used in the present study have been given below:

a) **Collection:** The term collection has been used to mean the act of making available or accessible the different kinds of information resources in the university libraries of Karnataka by means of procurement and / or licensing, through consortia efforts, gift and free of cost.
b) **Electronic information sources:** The phrase ‘electronic information source’ has been used to mean books, full-text journals, bibliographic sources, reference sources such as dictionaries, encyclopedias, directories, atlas, etc., theses, dissertations, online databases and other information resources encoded for manipulation by a computerized device. This resource may require the use of a peripheral directly connected to a computerized device (example, CD-ROM drive) or a connection to a computer network (example, the Internet).

c) **Electronic information services:** The phrase ‘electronic information services’ has been used to mean the library services delivered through electronic means by making use of electronic information resources. This includes: current awareness service, alerting service, news groups, virtual reference services, retrospective search service, translation services, and other such services offered by the university libraries under the study.

d) **Awareness:** The term ‘awareness’ has been used to mean the state of knowing about the availability and / or accessibility of electronic information resources and services in the university libraries of Karnataka State.

e) **Use:** The term ‘use’ has been used to mean the electronic information resources and services an individual actually uses to satisfy his / her information need for his / her study, research, teaching, publishing books, research papers, etc., and other purposes.
1.9 Chapterization

The study is organized into the following six chapters.

Chapter 1: Introduction

This chapter includes the background of the present study, university library, electronic information sources and services, statement of the problem, significance of the study, objectives, hypotheses, limitations of the study, methodology, definition of the concepts used and chapterisation.

Chapter 2: Literature Review

In this chapter an attempt has been made to review the related literature. This chapter has been divided into three parts: i) studies related to the conceptualization of the research problem ii) studies by foreign authors; and iii) studies by Indian authors.
Chapter 3: Research Methodology

This chapter includes the site of the study, population of the study, instruments used for the study, data collection and analysis methods.

Chapter 4: Collection of Electronic Information Sources and Services in University Libraries

This chapter deals with historical overview of the selected university libraries in Karnataka State, and provides analysis and interpretation of the data collected from the university librarians about the ICT infrastructure, status of library automation, information sources available in university libraries, electronic information services provided by the university libraries and user education programmes conducted by the university libraries.

Chapter 5: Awareness and Use of Electronic Information Sources and Services by the Academic Staff.

In this chapter, the data received from the academic staff have been tabulated and analysed. The data received from the academic staff have been divided as respondents’ background, respondents’ knowledge of computer, ICT facilities available to the academic staff, awareness and use of Internet facility, UGC-Infonet E-Journal Consortium, CD-ROM databases, OPAC, and awareness and participation in user education programmes, awareness and use of electronic information services.
Chapter 6: Findings, Suggestions and Concluding Observations

This chapter provides an overview of the major findings regarding the collection of electronic information sources and services in the university libraries and the extent to which the academic staff are aware of and use these sources and services. Based on the findings, the suggestions have been put-forth to enhance the collection of electronic information sources and services in university libraries and enhance the awareness and use of these resources and services by the academic staff.

1.10 References


