

**IMPACT OF UGC-INFONET DIGITAL LIBRARY CONSORTIUM ON SOCIAL
SCIENCE (SOS) AND SCHOOL OF ECONOMICS, MANAGEMENT AND
INFORMATION SCIENCE (SEMIS) FACULTY MEMBERS AND RESEARCH
SCHOLARS OF MIZORAM UNIVERSITY**

*A Dissertation submitted in partial fulfilment of the requirement for the Degree of
Master of Philosophy in Library and Information Science*

By

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2012

DECLARATION

I hereby declare that the dissertation entitled **“Impact of UGC-INFONET Digital Library Consortium on Social Science (SOS) and School of Economics, Management and Information Science (SEMIS) Faculty Members and Research Scholars of Mizoram University”** submitted by me has not previously formed the basis for the award of any Degree or Diploma or other similar title of this or to any other University or examination body.

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CERTIFICATE

This is to certify that the dissertation entitled **“Impact of UGC INFONET Digital Library Consortium on Social Science (SOS) and School Of Economics, Management and Information Science (SEMIS) Faculty Members and Research Scholars of Mizoram University”** submitted by Saidingpuii for the award of the Degree of Master of Philosophy in Library and Information Science is carried out under my guidance and incorporate the student’s bonafied research. This is the candidate’s original work and is worthy of examination.

Aizawl, Mizoram

(Prof. Pravakar Rath)
Supervisor

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Aizawl

(SAIDINGPUII)

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Library consortium is 'a co-operative arrangement among group or institution'. A library consortium provides a way for its member to conduct business in a co-operative manner. The basic premise of consortia is that its member can collectively achieve more than what they can achieve as individual institutions. There are many library consortium in India are in operation such as UGC-INFONET Digital Library Consortium, INDEST, CSIR E-journal Consortium.

The UGC-INFONET Digital Library Consortium was launched by Dr. A.P.J Abdul Kalam, the then President of India during December 2003. The UGC-INFONET Digital Library Consortium provides current as well archival access to more than 7000 core and peer-reviewed electronic journals and 10 bibliographic databases from 26 publishers, scholarly societies and aggregators including university presses in different disciplines. The programme has been implemented in a phased manner. In the first phase that began in 2004, access to e-resources was provided to 50 universities who had internet connectivity under the UGC-INFONET connectivity programmed. In the second phase, 50 more universities were added to the programmes in the year 2005 as additional universities got internet connectivity through UGC-INFONET programme. So far 160 universities out of 181 that come under the purview of UGC have been provided deferential access to subscribe e-resources. These e-resources cover almost all subject disciplines including arts, humanities, social science, physical sciences, chemical science, life science, computer science, management, mathematics and statistics, etc.

The centre has also initiated Interlibrary Loan (ILL) through JCCC (Journal Custom Content for Consortium). The JCCC provides article- level access to all article published in journal subscribed by the UGC-INFONET Digital Library Consortium as well as in journals subscribed by 22 university libraries designated as ILL centre of the INFLBNET Centre- Journal subscribe Under UGC-INFONET Digital Library Consortium offers access to more than 4500 core and peer- reviewed journals and 9 bibliographic database from 23 major publishers and aggregators. The access of the journals covers through current issues of the journals as well as 10years back files (from 1997 in the most cases) and from volume 1 onwards in some cases (American Chemical Society, Institute of Physic and JSTOR). The service is offered to more than 149 universities covered under phase I, II, III. Users can

browse search and download millions of full text articles published in various journals. We have witnessed that there is substantial increase in the usage of e-resources. In 2008, member libraries have downloaded 4686397 articles that are 49 percent higher as compared to the usage in 2008. As on date there are 180 Universities which are the members of UGC – INFONET Digital Library Consortium.

The Mizoram University, established in the year 2000 presently comprises with 7 schools of Studies consisting of 28 departments. Out of the 7 schools, the School of Social Science (SOS) consists of departments like 1) Political Science 2) Public Administration 3) Social Work 4) Psychology and 5) History & Ethnography. The School of Economics and Management and Information Science (SEMIS) consists of departments namely 1) Economics 2) Library & Information Science 3) Commerce 4) Management and 5) Journalism and Mass Communication. There are 180 Universities who are the members of UGC INFONET Digital Library Consortium of which Mizoram University is one of them.

1.2 Significance and Scope of the Study

The study assumes great importance in the present electronic environment for effective teaching, learning and research. The UGC-INFONET Digital Library Consortium is established with primary objective of providing access to academic world through full text journals covering all disciplines of studies. Mizoram University being one of the members of UGC-INFONET Digital Library Consortium is expected to make use of these E-resources for teaching and research by the Mizoram University academic fraternity. In order to make a Random Sampling, the scholar has identified two Schools of studies covering 10 departments in order to make an assessment of use and access to UGC-INFONET E-journals.

The scope of the present study is limited to two schools of studies of Mizoram University namely School of Social Science (SOS) and School of Economic, Management and Information Science (SEMIS), moreover the study is also limited to the faculty members and research scholars provided in **Appendix I**. The study further covers the extent access and use of UGC-INFONET Digital Library Consortium by the faculty member and research scholars of School of Social Science (SOS) and School of Economics, Management and Information Science (SEMIS) of Mizoram University (MZU).

1.3 Review of Literature

The Review of Literature is an essential component of a research problem in order to assess the available of research output in the form of publications. The present study traced out the following research publication on the topic and it is understood that no such has been undertaken so far by any scholar of Mizoram University (MZU). The following are the available related literature on the research problem:

Agboola, Idayat Odunola, Use of Print and Electronic Resources by Agricultural Science Students in Nigerian Universities. Library and Information Science Research. Vol. no. 32, Issue No. 1, 2010. Pages 62-65.

“A two–part questionnaire was design to elicit information on use of print and electronic resources by agricultural science students in Nigerian universities. 912 respondents from faculties of agriculture in three Nigerian universities completed the questionnaires. The results revealed that agricultural science students most prefer to use textbooks (42.1%) among print materials, while the Essential Electronic Agricultural Library (TEEAL) is the most preferred among electronic resources available in their libraries (52.2%). Major problems faced by the agricultural Science students include inadequate access to full internet connectivity and lack of skills on their part to use available electronic database properly. The study recommends restructuring library collections by increasing the number of agricultural textbooks and database to meet the information use and retrieval needs of agricultural science students. Other recommendations include establishing Internet ready computer centers to complement teaching, learning, and research in the library”.

Aharony, Noa, Web 2.0 use by Librarians. Library and Information Science Research. Vol. no. 31, Issue No. 1, 2009. Pages 29-37.

“The current research explores whether librarians, whose main work focuses on information, are familiar with new technological changes and innovations, and whether they make use of different Web 2.0 applications. The research examines whether personality characteristics (resistance to change , cognitive appraisal, empowerment and extroversion or introversion), as well as computer expertise, motivation, importance and capacity towards studying and integrating different applications of Web 2.0 in future, influence librarians’ use

of Web 2.0. Different questionnaires were distributed to 168 randomly Israeli librarians throughout the country. The research revealed that personal characteristics as well as computer expertise, motivation, importance and capacity towards studying and integrating different applications of Web 2.0 in the future, influence librarians' use of Web 2.0. These findings have theoretical as well as practical implications”.

Aharony, Noa, The influence of LIS students' personality characteristics on their perceptions towards Web 2.0 use. Journal of Librarianship and information Science. Vol. no. 4, Issue No. 4, 2009. Pages 227-230.

“The Information world in which Library and Information science (LIS) students study and are being educated is in a state of constant change. As web 2.0 is becoming an important and central topic in our information world, the research report here explores whether LIS students are familiar with technological changes and innovations, and whether they make use of the different Web 2.0 applications. The research examined whether personality characteristics (learning strategies, resistance to change and cognitive appraisal). As well as learning facilitator such as motivation, capacity and importance of studying and integrating different applications of Web 2.0 in the future, influenced LIS students' perceptions towards Web 2.0 use. Different questionnaires were distributed to 160 randomly selected Israeli students from three different LIS Programme. The research revealed a moderate tendency of LIS students to use Web 2.0 applications. It was found that personality characteristics as well as learning facilitators influenced LIS students' perceptions towards Web 2.0 use”.

Chua, Alton Y.K. and Goh, Dion H. A Study of Web 2.0 applications in library websites. Library and Information Science Research. Vol. no. 32, Issue No. 3, 2010. Pages 203-211.

“Web 2.0 represents an emerging suite of applications that hold immense potential in enriching communication, enabling collaboration and fostering innovation. However, little work has been done hitherto to research Web 2.0 applications in library websites. This paper addresses the following three research questions: (a) To what extent are Web 2.0 applications prevalent in libraries? (b) In what ways have Web 2.0 applications been used in libraries? and (c) Does the presence of Web 2.0 applications enhance the quality of library websites? Divided equally between public and academic, 120 libraries' websites from North America,

Europe and Asia were sampled and analyzed using a three-step content analysis method. The findings suggest that the order of popularity of Web 2.0 applications implemented in libraries is: Blogs, RSS, Instant Messaging, Social Networking Services, Wikis and Social Tagging Applications. Also, libraries have recognized how different Web 2.0 applications can be used complementarily to increase the level of user engagement. Finally, the presence of Web 2.0 applications was found to be associated with the overall quality, and in particular, service quality of library websites. This paper concludes by highlighting implications for both librarians and scholars interested to delve deeper into the implementation of Web 2.0 applications”.

Dastforoush, Masoumeh Tajafari and Venkatesha, Y, Electronic Journals’ Usage and User Studies: A Literature Review. SRELS Journal of Information Management. Vol. no. 47, Issue No. 2, 2010. Pages 141- 153.

“This articles aims to present an overall picture of the studies that have been done in the area of usage and users’ studies of electronic journals in recent years (2004 onward) till present, in a way that will be of value to researchers. This review is presented under three headings and nine sub-headings. Originality/value – The paper provides a picture of electronic journals usage and user studies. It is valuable for students, teachers in library and information science field and especially researchers who want to do research in this field”.

Dhar, Megna, The Changing Role of Library Professionals in the Information Technology Era. Journal of IASLIC Bulletin. Vol. no. 55, Issue No. 5, 2010. Pages 119-125.

“Over the decades, there has been tremendous change in the information world. Everyone has to adapt to these changes. Changes in society and demands for information utilization have forced the information professionals to look for more effective and efficient methods for processing, storing and retrieving information. To cope up with these challenges, librarians and other information professionals have resorted to the application of modern information technology. This paper highlights the new and future role of library professionals, impact of IT on the job and work performance of library professionals, benefits of the internet for library professionals, new and core skills required to be learned by information professionals and measures to cope up with the challenges. Suggestions for information professional to adapt new electronic information environment for better and

more convenient library and information services to users communities have been discussed in this paper.

Jana, Sibsankar and Bhattacharya, Udayan, Towards Understanding Digital Object. Journal of IASLIC Bulletin. Vol. no. 54, Issue No. 3, 200. Pages 147-156.

“Present study reveals overall frame work of the digital system in the network environment. The depth study of the different components of digital object is stated. It also encompasses the functioning of library digital frame works with respect to the uploading of digital information to the digital stores and downloading the same as per user request”.

Joshi, Govind (2006). Digital Library Initiative in North East India with Special Reference to Tocklai Experimental Station, Ahmedabad, INFLIBNET Centre.

“Digitization has become the buzz word in the modern Library and Information Science/Service (LIS). Objectives of digitization, Issues related to with digitization, Indian’s initiatives are discussed. Government of India’s project, schemes presently available to libraries and individuals for preservation /conservations of rare and old books, documents and other such materials of cultural heritage are stated. Tocklai’s Digitization project is discussed. Details of born digitals documents and databases which are Open Source Resources (OSR) for industrial researchers in plantation crops industry are discussed”.

Kaur, Amritpa, Impact of Electronic Journals on University Libraries of Punjab and Chandigarh: A Study. SRELS Journal of Information Management. Vol. no. 48, Issue No. 3, 2011. Pages 265- 279.

“The present study examines the impact of e- journals on university libraries in terms of resources, staffing, space, technical services and equipments. A well structured questionnaire was design to elicit opinions of the librarians. The results of the survey provide useful information regarding impact of e-journals on subscription to e- journals, infrastructure, staff, space, technical services, photocopy, inter-library loan, library use and reference service. On the basis of the results, some suggestions have been put forward for developing e- journals and ensuring their proper maintenance and utilization”.

Kaur, Amritpal and Randhawa, Sarwan Singh, Use of Electronic Database in University Libraries of British Columbia: A Study. SRELS Journal of Information Management. Vol. no. 47, Issue No. 6, 2010. Pages 641-652.

“The Present Study aims at analyzing the use of electronic database in three universities of British Columbia. A well structured questionnaire was design to collect the responses of the teachers and the students. The data was collected through a web based survey. One thousand teachers and Students were requested to fill up the survey out of which 515 responses were received. The response rate was 51.5 %. The study deals with the various aspects of the use of databases such as familiarity with databases, method of learning database use skills, frequency of database use, purposes for which the databases are used, success rate in finding the information, problems in finding the information, features of a good database and the most preferred database. The result of the Survey provides useful information about the use of databases. Some suggestions are put forth to make the databases more beneficial for studies and research purposes”.

Madalli, Devika P and P.U, Manju, Online Digital Asset Creation: Technology and Standards. Journal of IASLIC Bulletin. Vol. no. 52, Issue No. 2, 2007. Pages 105-114.

“Digital library initiatives in India consist of either born digital resources or material that is retro-converted from hard copies while some are hybrid having both the types. Majority of the digital libraries have some kind of digitization activity like the partner project of the Universal Digital Library project or the mammoth National Manuscript Mission digitization project. Often before embarking on digitization project, implementers are faced with various steps in decision making regarding components such as hardware and software, storage devices and network options. In addition, they also need to make the right decision on what formats to store the digitized collection in, how to manipulate in data, organizing techniques and adhering to world standards that are applicable at different stages in the project. This paper leverages the experiences of the DRTC digital library of seminar and conference proceedings. The paper discusses about the digitization project and the issues and the steps involved in the process of digitization. The paper also outlines some of the standards followed in the process, and the formats used for the digital file storage”.

Mukherjee, Bhaskar and Kumar, Prashant, Use of UGC-infonet e-journals by research scholars of the Banaras Hindu University , Varavasi: A Case Study. Annals of Library and Information Studies. Vol. no. 57, Issue No. 2, 2010. Pages 339-347.

“Attempts to identify the users’ requirement of online journals in general and to know the use of online journals that are available through UGC-INFONET e-journals consortium in particular. A questionnaire survey was conducted amongst 100 research scholars of various departments like history, political science, sociology, psychology and economics at the Faculty of Arts, Banaras Hindu University, Varanasi. Reveals that there is a demand for more e-journal titles although a substantial number of users (61.90 %) are satisfied with the existing model of UGC–Infonet consortium. Concludes that comprehensive training on availability and usability would be of great help to the users”.

Neghaban, Mohamad Baghar and Talawar, V.G, A Comparative Study of E- Resources Dependency among Iranian and Indian Social Science Faculty members. SRELS Journal of Information Management. Vol. no. 47, Issue no. 5, 2010. Pages 517-522.

“The present study is aimed at a comparative study of dependency e- resources by Iranian and Indian social science faculty members. A total of 487 respondents (232 from Iran and 255 from India) were randomly selected from both the countries. A questionnaire measuring dependency on various e-resources: e-books, e-journals, e-tutorials, online databases, CD-database and e-reports was prepared by the investigator and administered to the sample selected. Statistical methods like descriptive statistics and contingencies coefficient analysis were employed to verify the hypotheses. Results revealed that Iranian faculty members were more dependent on all e- resources selected for the study”.

Saravanan, P and Mary, A Lawrence, Teachers Approach to Internet and Online Information Resources. Journal of IASLIC Bulletin. Vol. no. 53, Issue No. 3, 2007. Pages 150-158.

“Internet and online information resources provide seamless access to wide variety of information ranging from primary to tertiary source. But most of the time its quality remains doubtful, quality consciousness among the users are necessary for qualitative output. Moreover, Format, style, arrangement etc. are entirely different from traditional one, users

are expected to follow different approach to access and use on-line source. The present study aims to know about the college teachers approach to internet and online information resources and their qualitative consciousness. Study revealed that quality consciousness among the college teachers are poor and users approach to internet and online information resources are similar to traditional print media. Also the most preferred search engine is Google. The study also suggests some remedial measures to improve quality consciousness among the teachers”.

Singh, R.K Joteen, Devi, Th Maduri and Raychaudhury, Arup, Use of Internet based e-resources at Manipur University: A Survey. Annals of Library and Information Studies. Vol. no. 56, Issue No. 1, 2009. Pages 55-57.

“Describes a survey on the use of the electronic information focusing on the internet services by the users of Manipur University library. Also examines the utilization, purpose, difficulties and satisfaction level of users about internet based e-resources services provided by the library. Finds that low speed internet access, erratic power supply and lack of required full text journals are problems with regard to the use of internet based e-resource”.

Tariang, Bikika Laloo and Lahkar, N, Evaluation of websites used by Social Scientists of North East India. Journal of IASLIC Bulletin. Vol. no. 55, Issue No. 1, 2010. Pages 43-50.

“Social Science teachers including faculty members and research scholars in two universities of North East India were requested to provide a list of their most used websites for the purpose of this stud. The websites were then evaluated to find out the quality to their design and content. It was found that websites produced from North East India and relating to the Social Science are well designed and contain relevant and up-to-date information”.

Walmika, R.H et al., Awareness and use of UGC-INFONET Digital Library Consortium by the Faculty mummers of Karnataka State Universities. Journal of Annals of Library and Information Studies. Vol. no. 57, Issue No.1, 2010. Pages 33-43.

“A questionnaire bases survey found that 39.79 percent of the faculty members are aware of and use the UGC-INFONET Digital Library Consortium resource where 35.99 percent are aware but do not use and 24.22 percent are not at all aware of the available of the

consortium resources. Majority of the non-users belong to social sciences and humanities and those who have not undergone formal computer training. Comparatively the science faculty uses the consortium resources more frequently than those belonging to social science and humanities. Lack of knowledge to use, insufficient internet nodes, slow bandwidth and lack of relevant information sources are found to be the major problem faced. Only 5.22 percent of the faculty members have indicated that they have necessary expertise to use the digital resource. About 37 percent of the faculty member were aware of and participated in user education programmers conducted by their university”.

1.4 Research Design

1.4.1 Statement of the Problem

UGC-INFONET Digital Library Consortium is considered as a boon to the academic community which consists of students, teachers and research scholars since the 7000+ full text scholarly journal are available through UGC-INFONET Digital Library Consortium, which are accessed and used by the Academic of the member Universities in India. It is necessary to make a study on impact of UGC-INFONET Digital Library Consortium on the academic and research School of Mizoram University. School of Social science and SEMIS are two well established schools having highest number of faculty members and research scholars. In order to assess the extent of used of UGC INFONET Digital Library Consortium by School of Social Science and SEMIS shall be a study of its fast kind which will reveal the present use and measures to be taken for optimum use of UGC-INFONET e-resources. These are the reasons which motivated me to take up this research problem entitled “Impact of UGC-INFONET Digital Library Consortium on Social Science and SEMIS faculty members and research scholars of Mizoram University”.

1.4.2 Objective of the Research Study

The following are the objectives of the present study to:

- a) Understand the acquaintance and use of UGC-INFONET Digital Library Consortium by the faculties and research scholars of School of Social Science (SOS) and School of Economics, Management and Information Science (SEMIS).

- b) Assess the extent of use of UGC-INFONET Digital Library Consortium for academic and research purposes.
- c) Study the technological and technical problems associated with the optimum use of UGC INFONET Digital Library Consortium.
- d) Suggest remedial measures to be undertaken by MZU authorities and INFLIBNET (UGC) for optimum use of UGC-INFONET Digital Library Consortium.

1.4.3 Hypothesis

The present study is subjected to the following tentative assumptions:

- a) Lack of information literacy and regular use of internet resulting into minimum use of UGC-INFONET Digital Library consortium.
- b) Occasional technical problem has an impact on accessing the internet and UGC-INFONET Digital Library Consortium site.
- c) Regular user awareness programs by INFLIBNET can enhance the use of UGC-INFONET Digital Library Consortium.
- d) High Speed Internet with adequate bandwidth and round o'clock internet access to faculty member and research scholars can lead to optimum used of UGC –INFONET Digital Library e-resources.

1.4.4 Research Methodology

The following are the methodologies adopted for data collection, analysis and interpretation from a Sample of 82 Faculty members and Research scholars of the Mizoram University.

1) **Questionnaire Method:**

The scholars shall designed a structured questionnaire (**Provided in Appendix II**) which were circulated to 110 Faculty members and Research scholars of School of Social Science and SEMIS (MZU) in order to obtain required information with regards to access use and technical difficulties if any for optimal use of UGC–INFONET Digital Library Consortium. During collection of questionnaires from Faculty members and Research scholars under study the scholar interviewed the Faculty members of the university in order to trace out the benefits and constraints associated with accessing, using the UGC-INFONET Digital Library Consortium for academic and research purposes.

2) **Interview Method:**

The scholar during the study made personal discussing with the Senior Library Professionals (Mizoram University Central Library) and System administrators of Mizoram University Computer Centre in order to know the extent of use of UGC-INFONET Digital Library Consortium by the academic fraternity, technological and technical problems faced and possible solution to overcome them. This Interview Method helped researcher to provide valuable suggestions for optimum use of UGC-INFONET Digital Library Consortium by Mizoram University academic fraternity.

1.5 Data Analysis and Interpretation:

Since the present study includes the Faculty members and Research Scholars of School of Social Science (SOS) and School of Economics, Management and Information Science (SEMIS), the scholar received response from 82 Faculty members and Research scholars belonging to the two schools under study. In other words, 82 represent the total population under study. Data collected are be scientifically analyzed and interpreted using quantitative data analysis software namely MS Excel in order to derive appropriate findings, suggestions and conclusion.

1.6 Chapterization

The present study consists of the following chapters:

Chapter 1: Introduction

Chapter 2: Mizoram University with Special reference to School of Economics, Management and Information Science (SEMIS) and School of Social Science (SOS).

Chapter 3: UGC–INFONET Digital Library Consortium: An Overview.

Chapter 4: Use of E-Resources provided by UGC –INFONET Digital Library Consortium–An Analysis.

Chapter 5: Data Analysis and Findings.

Chapter 6: Suggestions and Conclusion.

Bibliography and Appendices.

Appendix - I

School of Economics, Management And Information Science. (SEMIS)	Sl. No.	Name Of The Department	Faculty Members	Research Scholars	Total
School Of Social Science.(SOS)	1.	Economics	7	32	39
	2.	Library & Info. Science	7	10	17
	3.	Commerce	6	17	23
	4.	Management	7	13	20
	5.	Journalism & Mass Communications	4	0	4
	1.	Political Science	4	12	16
	2.	Social Work	6	12	18
	3.	Public Administration	5	11	16
	4.	History & Ethnography	5	14	19
	5.	Psychology	5	15	20
		Grand Total	56	136	192

[Source: Mizoram University Annual Report (2009-2010) and concerned Department Records (unpublished).]

CHAPTER 2

**Mizoram University with special reference to
School of Economics, Management and
Information Science (SEMIS) and School of
Social Science (SOS)**

2.1 Introduction

Mizoram University was established on 2nd July 2001 by the Mizoram University Act, 2000 which appeared in the Gazette of India (Extraordinary) on 25th April 2000 as a Central University. The objective of the University, as laid down in the Act are “to disseminate and advance Knowledge by providing instructional and research facilities in such branches of learning as it may deem fit, to make provision for integrated in humanities, natural and physical sciences, social sciences, forestry and other allied disciplines in the educational programmes of the university; to take appropriate measures for promoting innovations in teaching-disciplinary studies and research to educate and train man-power in the development of the state of Mizoram and to pay special attention to the improvement of the social and economic conditions and welfare of the people of that State, their intellectual, academic and cultural development”. Keeping these objectives in view, Mizoram University has embarked on various programmed/schemes in terms of academic and administrative development.

The jurisdiction of the Mizoram University extends to the whole of Mizoram, the erstwhile jurisdiction of Mizoram Campus of North Eastern Hill University, Shillong, which functioned till 1.7.2001. Initially, the University had 7 academic departments inherited from NEHU, but now has a total of 28 academic departments.

Mizoram University in the current Scenario has changed immensely since the recent move of the main administration to its permanent campus at Tanhril. The University is now well consolidated in this main campus.

The permanent campus of Mizoram University rests on a plot of land measuring 978.1988 acres with lush greenery and scenic hills, leased by the Government of Mizoram at Tanhril. It is now undergoing a sea of change, thanks to the development and construction works taking place with the help of the sum of Rs. 25 crores from DoNER and anticipate commitment of UGC Grant for the Infrastructure of Development of Mizoram University.

The UGC accorded Mizoram University a NET examination Centre wherein the first examination was conducted on 29/12/2002. Similarly, the North-Eastern Council of SLET based at Guwahati also accorded Mizoram University the status of SLET examination centre since 2004.

At present, there are 27 under-graduate Colleges including 2 professional institutions affiliated to the University. The total roll-strength in these institutions approximates 8279 students.

Brief summary of the University:

1. Number of Schools functioning at present : **7**
2. Number departments functioning at present : **28**
3. Beginning of academic session : **July**
4. Admission Advertisement : **May**

2.2 Profile of Mizoram University

2.2.1 History

The University is the fruit of the Mizoram Accord between Mizo National Front and Government of India on 30 June 1986, which states that: It is open to the State to move the establishment of the separate University in the State in accordance with the prescribed procedure. However, it was not created de novo. The North Eastern Hill University, with its headquarters at Shillong had already run its Mizoram campus since 1978. The Mizoram University Act, 2000 was enacted by the Parliament of India that the University was officially established on July 2 2001, incorporating all the facilities of the existing Mizoram campus of NEHU. The jurisdiction of the University therefore extends to the whole of Mizoram. Initially, the University had 7 academic departments inherited from NEHU, but now has a total of 18 academic departments and hopes to bring the number to a total of 27 departments within the current Xth Plan. The University under NEHU functioned from various rented buildings in Aizawl for over two decades.

2.2.2 Aims & Objectives of Mizoram University

The objective of the Mizoram University is to impart an advanced education and make provisions for research facilities.

Its aims to promote innovations and trained man power in the state. The qualified professors of the university are doing quality research on various disciplines and thus helping in the growth of the university.

2.2.3 Campus

The present scenario of Mizoram University after four years since its birth, has changed immensely especially after the recent move of the main administration and some academic departments to its permanent campus at Tanhril, Aizawl. Except for a few remaining academic departments, the Sports Cell, the Medical Clinic and Central Library, the University is now well consolidated in its main campus. A plot of land measuring 978.1988 acres (3,958,630 m²) with its lush greenery and scenic hills, leased by the Government of Mizoram at Tanhril serves as the permanent campus of Mizoram University. It is now undergoing a sea change, thanks to the development and construction works taking place with the help of the sum of Rs. 25 crores from DoNER and anticipated commitment of UGC Grant for the Infrastructure of Development of Mizoram University under Xth Plan amounting to Rs. 43.50 Crores.

2.2.4 Functions and Duties of Mizoram University

The functions and duties of Mizoram University as enshrined in the Mizoram University Act 2000 are enumerated in Section 4 and 5 of the said Act and is reproduced below:

Section 4:

The objects of the University shall be to disseminate and advance knowledge by providing instructional and research facilities in such branches of learning as it may seem fit, to make provisions for integrated courses in humanities, natural and physical sciences, social sciences, forestry and other allied disciplines in the educational programmes in the University; to take appropriate measures for promoting innovations in teaching learning process, inter-disciplinary studies and research; to educate and train manpower in the development of the State of Mizoram; and to pay special attention to the improvement of the social and economic conditions and welfare of the people of the State, their intellectual, academic and cultural development.

Section 5:

The University shall have the following powers namely:-

1. To provide for instructions in such branches of learning as the University may, from time to time, determine and to make provision for research and for the advancement and dissemination of knowledge.
2. To grant, subject to such condition as the University may determine, diplomas or certificates to, and confer degrees or other academic distinctions on the basis of examination, evaluation or any other method of testing, on persons, and to withdraw any such diplomas, certificates, degrees or other academic distinctions for good and sufficient cause.
3. To organize and to undertake extramural studies, training and extension services.
4. To confer honorary degree or other distinctions in the manner prescribed by the statutes.
5. To provide facilities through the distance education system to such persons as it may determine.
6. To institute Principalship, Professorship, Readerships, Lectureships and other teaching or academic positions, required by the University and to appoint persons to such Principalships, Professorships, Lectureships, or other teaching or academic positions.
7. To recognize an institute of higher learning for such purposes as the University may determine and to withdraw such recognition.
8. To recognize persons for imparting instructions in any college or institution admitted to the privileges of the University.
9. To appoint persons working in any other University or organization as teacher of the University for a specified period.
10. To create administrative, ministerial and other posts and to make appointment thereto.
11. To co-operate or collaborate or associate with any other University or authority or institution of higher learning in such manner and such purposes as the University may determine.

12. To establish, with the prior approval of the Central Government, such center and specialized laboratories or other units for research and instruction as are, in the opinion of the University necessary for the furtherance of its objects.
13. To institute and award fellowships, Scholarships, Studentships, Medals and prizes.
14. To establish and maintain Colleges, Institution and Halls.
15. To make provision for research and advisory services and for that purpose to enter into such arrangements with other institutions, industrial or other organizations, as the University may deem necessary.
16. To organize and conduct refresher courses, workshops, seminars and other programmes for teachers, evaluators and other academic staff.
17. To admit to its privileges colleges and institutions within the State of Mizoram not maintained by the University; to withdraw all or any of those privileges in accordance with such conditions as may be prescribed by the Statutes; to recognize, guide, supervise, and control Halls not maintained by the University and other accommodation for students, and to withdraw and such recognition.
18. To appoint on contract or otherwise visiting Professors, Emeritus Professors, Consultants, Scholars and such other persons who may contribute to the advancement of the objects of the University.
19. To confer autonomous status on a College or an Institution or a Department, as the case may be, in accordance with the statutes.
20. To determine standards of admission to the University, which may include, examination, evaluation or any other method of testing.
21. To demand and receive payment of fees and other charges.
22. To supervise the residences of the students of the University and to make arrangements for promoting their health and general welfare.
23. To lay down conditions of service of all categories of employees, including their code of conduct.

24. To regulate and enforce discipline among the students and the employees and to take such disciplinary measures in this regard as may be deemed by the University to be necessary.
25. To make arrangements for promoting the health and general welfare of the employees.
26. To receive benefactions, donations and gifts and to acquire, hold, manage and dispose of any property, movable or immovable, including trust endowment properties for the purposes of the University.
27. To borrow, with the approval of the Central Government, on the Security of the property of the University, money for the purposes of the University.
28. To do all such other acts and things as may be necessary, incidental or conducive to the attainment of all or any of its objects.

Other pertinent sections of the Act are also reproduced below:

Section 7(1):

The jurisdiction of the University shall extend to the whole of the State of Mizoram.

Section 8:

The University shall be open to persons of either sex and of whatever caste, creed, race or class, and it shall not be lawful for the University to adopt or impose on any person, any test whatsoever of religious belief or profession in order to entitle him to be appointed as a teacher of the University or to hold any other office therein or be admitted as a student in the University or to graduate thereat or to enjoy or exercise any privilege thereof. Provided that nothing in this section shall be deemed to prevent the University from making special provisions for the employment or admission of women, physically handicapped or of persons belonging to the weaker sections of the society and, in particular, of the Scheduled Castes and the Scheduled Tribes.

2.3 Schools and Departments of Mizoram University

	Name Of School	Sl. No	Name Of Department
1.	School Of Economics, Management & Information Science (SEMIS)	1. 2. 3. 4. 5.	Economics Library & Information Science Commerce Management Journalism & Mass Communication
2.	Education & Humanities	1. 2. 3. 4.	English Mizo Education Hindi
3.	Social Science	1. 2. 3. 4. 5.	Psychology Public Administration History & Ethnography Political Science Social Work
4.	Earth Sciences & Natural Resources Management	1. 2. 3. 4. 5. 6.	Geology Forestry Geography & Resource Management Extension Education & Rural Development Horticulture, Aromatic & Medicinal Plants Environmental Sciences
5.	Life Sciences	1. 2. 3.	Botany Bio-technology Zoology
6.	Physical Sciences	1. 2. 3.	Physics Chemistry Mathematics & Computer Science
7.	Engineering & Technology	1. 2.	Electronics & Communication Engineering Information Technology

2.3.1 Central Library

Central library, Mizoram University has been witnessing noteworthy development in various spheres during the last few years. Growth may be seen in its holdings, users and application of technology. The collection by March, 2011 included 78,311 number of books, 272 Thesis/Dissertations and 8,026 number of Bound Volumes of Journals.

The Library at present subscribes to 247 Journals, 32 General periodicals

and 19 dailies (English: 9, Mizo: 10). The total Library membership is 1,617 i.e. 1,058 UG and PG Students, 39 M.Phil, 273 Ph.D scholars, 152 Teachers, 3 Guest Lecturer, 2 Departmental Libraries and 90 Non-teaching staff. During this year, 29,091 books were borrowed by the users and had 10,890 visitors.

The entire library holdings have been available in machine readable catalogue since 2008; and the computerized bibliographic information of the library holdings have also been available for users' searching throughout the campus Network (intranet) using web OPAC. Automated circulation system using barcode technology has been used since 1st Dec. 2008 which provides easy and prompt service. Library has been providing lending and reprographic services, Orientation Programmes for newly admitted students of various Academic Departments.

Digitization of Mizoram University's own documents and publications for setting up of an '**Institutional Repository**' is an ongoing process. The repository will collect and provide free online access to all types of institutional research outputs initially within the campus network (Intranet).

Besides, library is currently working on implementation of advanced technology in the field of identification, security, tracking and automated handling of Library materials **using Electro-magnetic and Radio Frequency Identification (RFID) Library management system** in order to improve the efficiency of Library operations. The implementation work had been started from end of February, 2011 and is expected to be completed within a few months.

Library also initiated the process of implementing CD/DVD mirror server to store the contents of CDs and DVDs and provide accessibility of the digital data archive throughout the campus network.

Subject-wise Collection (w.e.f. 01.04.2010 – 31.04.2011):

Sl. No	Department	No.of Books
1.	Education	520
2.	English	131
3.	Mizo	643
4.	Political Science	307
5.	Psychology	68
6.	History	122
7.	Social Work	80
8.	Public Administration	233
9.	Commerce	457
10.	Economics	64
11.	Library Science	349
12.	Management	435
13.	Forestry	160
14.	Geography	268
15.	Environmental Science	52
16.	Geology	91
17.	Horticulture	309
18.	Physics	193
19.	Chemistry	101
20.	Zoology	136
21.	Botany	156
22.	Elec. Engg	639
23.	Inf. Technology	581
24.	Mathematics & Computer Science	290

25.	Biotechnology	118
26.	Reference	586
27.	EE & RD	33
28.	Others (Gift)	29
	TOTAL	7,178

Infrastructure Development:

- 1) Vertical expansion of Phase I had been occupied - since August 2010
- 2) Horizontal expansion is still going on.

Number of Books and Journal Subscribed:

- 1) 1,239 bound volumes of Journals have been added during 2012.
- 2) Holdings (as on 31.3.2011)
 - (i) Books: **78,311**
 - (ii) Thesis / Dissertations: **272**
 - (iii) Bound volume of Journals: **8,026**
- 3) Periodicals / Journals subscribed:
 - (i) **247** journals and **32** General Periodicals
 - (ii) Dailies: English – **9**, Mizo – **10**
- 4) Books borrowed during 2010-11: **29,091**
- 5) No. of visitors during 2010-11: **10,890**

Library Members:

Total Library Members: **1,617**

- (i) UG & PG: **1,058**
- (ii) M.Phil: **39**
- (iii) Ph.D: **273**

(iv) Teachers: **15** (including GL)

(v) Non-Teaching Staff: **90**

(vi) No. of staff: **26** (AL-2, Info.Scientist-1, Prof. Asst-4, SPA-3, JLA-4, LA-8,

(vii) Gate Keeper-2, LDC-2, out of which 9 are recent appointments)

Activities of Central Library:

- 1) Provides lending service
- 2) Reprographic service
- 3) Used to conduct Orientation programmes for newly admitted students (dept-wise & category-wise)
- 4) Library holdings have been automated since 2008 and are available for users' searching throughout the campus network (intranet) using web OPAC
- 5) Automated circulation system using barcode technology has been used since 1st Dec 2008.
- 6) Digitization of MZU's own documents and publications for setting up of an 'Institutional Repository' is an on-going process.
- 7) Library is currently working on implementation of EM & RFID based Library security and management system.
- 8) Library is also in the process of implementing CD/DVD mirror server.

2.3.2 Computer Centre

Mizoram University Computer Centre provides computing facilities to students, teaching and Non-teaching staff of the University as well as imparting technical knowledge to students and staff alike. There are at present, as many as 25 high end Computers available

for the users. Leased Line Internet connection with 1Gbps bandwidth under NME-ICT scheme is used for providing Internet Services within the Campus.

The Centre is monitoring University Website (www.mzu.edu.in) and EDUSAT programme. The ongoing works of Examination Computerization is also supervised by the Centre. It had helped various academic departments in setting up of Computer Laboratories.

The Computer Centre is Data Centre for Campus Networking, which has covered all existing Academic and Administrative buildings. The Campus Network runs on a robust optical fibre backbone with a number of Cisco IP Phones. The Internet connection is shared over the campus LAN. As many as six high-configuration Windows and Linux servers are running presently.

The Centre had developed Intranet applications such as, Intranet Mail, Intranet Website, etc. LAN messenger software was installed in all computers and it is being extensively utilized by all employees for quick communications such as sharing of files, data and voice chat, etc.

The Centre has licensed copies of software such as Oracle 10g, SPSS 15.0, security packages along with a number of Microsoft products which are covered under Campus Licensing Agreement.

2.3.3 Health Centre

The Health Centre under Mizoram University is located Tanhril Campus. The Medical Officer and staff also make regular weekly visits on Tuesday and Fridays to Pachhunga University College. The Centre provides basic facility for curative and preventive measures besides playing an important role in educating and monitoring the health status of the students, teachers, staff and their dependants. A full-fledged Laboratory for blood, urine and stool examination is not yet in place but certain investigative procedures like examination of blood sugar, malarial parasites, typhoid, pregnancy, etc are available. We look forward to improved infrastructure for a fully equipped laboratory. The number of staff has also increase to provide better health facilities in the near future.

Consultation hours begin from 9 a.m. to 5 p.m. every day at Tanhril Campus and Tuesday and Friday at Pachhunga University College.

Duties of Health Centre are mentioned below:

1. Dispensing of medicines as prescribed by Medical Officer to :-
 - i) Students of Mizoram University
 - ii) Staff (regular) and their dependants
 - iii) Contract Staff only.
2. Attending to all medical emergencies in the campus during office hours.

2.3.4 Students' Welfare

By the instrument of Notification of Even No.6869- '77, Dt.11.3.2002, the office of the Dean of Students' Welfare, Mizoram University was created on 11th March 2002. Dr. Lalnuntluanga, Associate Professor, Dept., of Environmental Science, took charge of Dean on 21st July, 2010.

The Students' Welfare Committee was constituted to assist the Dean in the performance of his multifarious functions as prescribed by the Statute of the Mizoram University. Accordingly, the Committee has under its purview matters related to the activities of the students' Union, Study Tours, Students' Varsity Week and the general welfare of the student community taken as a whole. The Students' Welfare Committee, with the Dean as its Chairman, has met, whenever necessary, to discuss any matters connected with students' welfare and has, in fact, become an indispensable arm of the Dean in streamlining and guiding students' activities.

Members of Students Welfare Committee

Following are the existing members of Students' Welfare Committee of Mizoram University.

1. Dr. Lalnuntluanga, Associate Professor, Dean, Students' Welfare
Dept. of Environmental Science

- | | | |
|----|---|----------------------|
| 2. | Dr.Kalpana N.Desai, Reader, Dept. of Social Work | Member Secretary |
| 3. | Prof. Margaret Ch.Zama, Head, Department of English | Member |
| 4. | Prof. L.T.Khiangte, Professor, Dept. of Mizo | Member |
| 5. | Prof. H.Lalramnghinglova, Dept. of FEBES Dean,
School of Earth Sciences & Natural Resources
Management. | Member |
| 6. | Prof.R. Rinawma Head, Department of Geography
& TC & RM | Outgoing Dean of S.W |

Power and Functions of the Dean, Student's Welfare:

The powers and functions of the Dean, Students' Welfare, as enumerated in enumerated in the Statute of Mizoram University (Under Clause 1(i) of Statute 39) are as follows:

The Dean, Students' welfare shall:

1. Advise the Vice-Chancellor on matters relating to the admission of the students under the categories other than the 'Open Category.'
2. Co-ordinate the admission process in the University.
3. Co-ordinate the admission of the students in various halls of residents, approved hostel, and approved Lodges of the University.
4. Advise the Vice-Chancellor on the appointment of the Wardens to the Halls of residents, approved Hostels and approved Lodges of the University.
5. Assist the Vice-Chancellor in supervising and controlling the residents of all students by coordinating the activities of the Wardens.
6. Deal with the matters of management, overall discipline and conditions of living in the halls of residence, approved hostels, and approved lodges of the University.

7. Advise the University in the matter of organizations and development of student bodies
8. Co-ordinate the activities of the different bodies concerning student welfare.
9. Arrange for and co-ordinate the elections of the Office bearers and other representatives of the MZU students Union as per the rules of the University.
10. Advise the University on the nomination of student representatives on various bodies of the University.
11. Supervise / or organize the co-curricular and sports activities of the Post-Graduate Students and Research Scholars in the Campuses.
12. Be in overall charges of the funds for the cultural and sports activities of MZU students union and other student bodies in the University. He shall forward the accounts of expenditure received from the MZU students Union and other students' bodies as mentioned above to the University. Such accounts shall be certified by a body of the University which receives them.
13. Issue the travel concession to the students and shall recommend the educational tours/ excursions of the students.
14. Supervise and/or organize the carrier guidance and other counselling facilities for the welfare of the students.
15. Supervise and/or organize such programmes and activities which shall strengthen the students-teacher relationship, student-administration and student-society relationships.
16. Undertake such other duties and responsibilities relating to the welfare of the students as directed by the Vice-Chancellor from time to time.

2.4 School of Economics, Management & Information Science (SEMIS)

2.4.1 Introduction

Under the School of Economics, Management & Information Sciences there have been five Departments viz. Economics, Commerce, Library and Information Sciences, Management and Journalism and Mass Communication. Economics Department is one of the oldest departments in the University. It was started in 1979(during the era of then North Eastern Hill University Mizoram Campus). The Department of Library and Information Sciences, Commerce and that of Management followed. There is a new Department addition in the School i.e. the introduction of Mass Communication Department. For this new Department teachers are being recruited. With the addition of Mass Communication Department, there are five departments under the School of SEMIS.

Placement received by students under the school has been quite encouraging. The Department of Economic Successfully completed its project entitled “Enhancing Trade Related Research Capacity Amongst Universities & Individual Researchers” under United Nations Conference on Trade and Development (UNCTAD). For the first year, under the project rupees twenty five lakhs had been spent. The project has been renewed for the second year and for which rupees twenty two lakhs had been sanctioned. The project that had been taken up include: Training, - Workshop for fifteen days, International Seminar, granting fellowship etc.

Workshop/Seminar/Refresher Course conducted by the Department under the school indicated the interest, dedication and zeal that the School has in academic matters.

2.4.2 Table showing information on School of Economics, Management and Information Science (SEMIS)

Sl. No.	Name of Department	Faculty Member	No. of PhD	No. of M.Phil Scholar	No. of Junior Students	No. of Senior Students
1.	Economics	7	32	0	38	40
2.	Library & Information Science	7	10	5	20	20
3.	Commerce	6	17	4	22	21
4.	Management	7	13	01	24	18
5.	Journalism & Mass Communication	4	0	0	17	0

2.5 School of Social Science (SOS)

2.5.1 Introduction

The School of Social Sciences came into being as an entity in the year 2002 through a notification issued by the Registrar, Mizoram University vide letter no 5/3/05-Adm II/60/002. The school consists of the Department of Political Science, Public Administration, Psychology, History and Ethnography and Social Work. The First School Board Meeting was held on the 4th July 2003. In the last six years the school has organized 16 Boards Meetings. The participation of the External Experts in the Board Meetings provides a special academic rigour to the proceedings. Besides, many important decisions pertaining to the academic matters of the departments are made at the School level during the HODs meetings of the Schools. These HODs meeting also takes stocks of the academic activities of the respective departments in a more systematic and organized way.

The School of Social Sciences also arranges seminars and interactive sessions with important Resource Persons who are available on the campus. The 1st orientation Course during 3rd -27th November 2009 under the auspices of the UGC –Academic Staff College, Mizoram University, was successfully organized.

2.5.2 Table showing Information on School of Social Science (SOS)

Sl. No.	Name of Department	Faculty Member	No. of PhD	No. of M.Phil Scholar	No. of Junior Students	No. of Senior Students
1.	Psychology	5	15	0	22	25
2.	Public Administration	5	11	0	30	30
3.	History & Ethnography	5	14	0	35	28
4.	Political Science	4	12	0	35	24
5.	Social Work	6	12	0	20	16



Map of Mizoram University Campus



A Partial View Of Mizoram University Campus



Health Centre



Central Library



Computer Centre



Academic Building

CHAPTER 3

**UGC-INFONET Digital Library:
An Overview**

3.1 Introduction

The UGC-INFONET Digital Library Consortium was formally launched in December, 2003 by Honourable Dr. A P J Abdul Kalam, the President of India, soon after providing the Internet connectivity to the universities in the year 2003 under the UGC-Infonet programme. The Consortium proved to be a recipe to university libraries which have been discontinuing subscription of scholarly journals because of "Serials Crisis". The term "serials crisis" refers to exponential and continuing increase in subscription cost of scholarly journals. The crisis is a result of rise in cost of journals much faster than the rate of inflation, increase in number of journals and the paucity of funds available to the libraries.

The Consortium provides current as well as archival access to more than 7000+ core and peer-reviewed journals and 10 bibliographic databases from 26 publishers and aggregators in different disciplines. The programme has been implemented in phased manner. In the first phase that began in 2004, access to E-resources was provided to 50 universities who had Internet connectivity under the UGC-Infonet Connectivity programme of the UGC. In the second phase, 50 more universities were added to the programme in the year 2005. So far 160 Universities out of 181 that come under the purview of UGC have been provided differential access to subscribed e-resources. These e-resources covers almost all subject disciplines including arts, humanities, social sciences, physical sciences, chemical Sciences, life sciences, computer sciences, mathematics and statistics, etc. The programme is wholly funded by the UGC and executed by the INFLIBNET (Information and Library Network) Centre, Ahmedabad.

The centre has also initiated Inter-Library Loan (ILL) through JCCC (Journal Custom Content for Consortium). The JCCC provides articles-level access to all articles published in journals subscribed by the UGC-Infonet Digital Library Consortium as well as in journals subscribed by 22 university libraries designated as ILL Centers in the INFLIBNET (Information and Library Network) Centre, Ahmedabad.

3.1.1 Associate Members of the UGC-INFONET Digital Library Consortium

Success of UGC-INFONET Digital Library Consortium in the universities led to the demand for extension of the Consortium resources to the universities that are not under the purview of UGC. The Centre has initiated its Associate Membership Programme with an aim to extend access to E-resources subscribed by the Consortium to private universities and other research institutions. Under the scheme, private universities and other research institutions can enroll themselves as “Associate Member’ of the Consortium and subscription e- resources is same as applicable to the Consortium for its core members. Associate members are charged an annual membership of Rs.5000.00. The subscription of e-resources is subjected to the approval of respective publishers. So far more than 114 members have enrolled as associate members.

3.1.2 Access to E-Resources for walk-in Users

The centre has 15 Internet-enabled PCs dedicates for the walk-in users including students and researchers for accessing electronic resources subscribed under the UGC-Infonet Digital Library Consortium. The license agreements signed with the publishers of e-resources provide access to e-resources for ‘walk in’ users. The INFLIBNET Centre, as the coordinating agency for the consortium, gets complementary access to all e-resources subscribed under the Consortium. Students from Gujarat University, its affiliated colleges and nearby universities and colleges are welcome to access e-resources subscribed under the Consortium. Around 1000 users visit the Centre every year for accessing e-resources.

3.1.3 UGC-INFONET Internet Connectivity Programme:

Connectivity is one of the crucial infrastructural requirements for providing access to e-resources to universities. The UGC-INFONET Internet Connectivity Programmed was launched in 2002 by the Hon’ble Prime Minister of India for bringing qualitative changes in academic infrastructure of higher education.157 universities were provided Internet bandwidth ranging from 256 Kbps to 2 Mbps using Broadband LL/SCPC/DAMA/

FTDMA/RF Open Network Architecture by signing a quadripartite agreement with UGC, INFLIBNET, ERNET India and Universities.

With an aim to provide higher and scalable Internet bandwidth to universities even in remote locations, the UGC-INFONET was switch over to BSNL backbone w.e.f 1st April 2010 and renamed as UGC-INFONET 2.0. In the new scheme 10 Mbps (1:1) fibre optic leased line is being established for more than 180 universities to provide Internet service. UGC-Infonet 2.0 is laid on Fibre backbone of BSNL network which covers almost 614755 Rkm of OFC Cable and BSNL's Points of Presence (PoP) Centre and Network Architecture across the Country. The BSNL is using 12 (B) and 2(F) Section of UGC Act, is eligible to join UGC - Infonet 2.0 by requesting INFLIBNET Centre in prescribed format available at the UGC - Infonet website.

The entire project is funded by the UGC with 90% on capital investment and 100% of recurring bandwidth charges. The INFLIBNET plays an important role of monitoring and liasioning between the BSNL and the universities. Since UGC-INFONET 2.0 is using Fibre backbone, this will pave way for establishing National Knowledge Network (NKN) infrastructure with 1Gbps connectivity. The UGC-INFONET 2.0 will ultimately subsume into National Knowledge Network and the project will adopt new format for better utilization of NKN.

3.1.4 Bibliographic Standards, Formats and Protocols:

Bibliographic Standards and protocols are backbone of any bibliographic database and related software. The standards and protocols streamline the implementation of activities, provide utmost quality, consistency and most importantly facilitate interoperability, data transfer and exchange. Utmost efforts are being made to implement all recognized international standards such as Unicode, MARC21, AACR2, ISO2709, NCIP, FRBR, etc. into products and services of the Centre. The Centre participates in the activities of NISO (<http://www.niso.org>), the National Information Standards Organization, ISO (International Organization for Standardization) and BIS (Bureau of Indian Standards) as its members.

3.1.5 Awareness Programme on Access to E-resources

In order to promote access to e-resources, the Centre is organizing series of programme on access to E-resources subscribed under UGC-Infonet Digital Library Consortium. Such programmes are being organized in collaboration with the universities. In 2008, the Centre has organized fourteen such programmes and in 2009 six such programmes are organized till June.

3.1.6 Human Resource Development and Consultancy

Imparting training to manpower working in the university and college libraries in the use of IT is an important objective of the Centre and has been given due priority 423 training programmes, workshops and seminars focusing on the library automation and networking have so far been conducted till March 2010 benefiting 33, 944 participants. INFLIBNET Regional Training Programme for Library Automation (IRTPLA) and User Awareness Training Programme were conducted across the country in collaboration with the universities. National and International Convention called PLANNER in North-eastern regions and CALIBER in various states in India are being organized annually/ biannually as part of the human resource development activities. The Centre has also conducted 83 Training Programme on SOUL Installation and Operations for Libraries. Various categories of training programme conducted since the inception of the INFLIBNET Centre and number of participants who benefitted from these training programme are given.

Sl. No.	Name of the Programme	No. of States Covered	No. of Universities	No. of Programmes	Total No. of Participants
1.	IRTPLA	25	53	66	1,961
2.	Onsite/ In-house Training	18	67	67	718
3.	Awareness Programme on E-Resources	28	70	70	11,756
4.	Special Training Programme at INFLIBNET			57	1,143
5.	Jointly Organized Training Programmes/Workshops/Seminars	22		38	6,263
6.	Jointly Organized Training Programme for College Principals/Librarians	22		18	2,405
7.	CALIBER	11	16	16	5,875
8.	PLANNER	6	7	7	1,850
9.	National Seminar	1	1	1	125
10.	SOUL Training Programmes including in-house training Programmes at INFLIBNET Centre	31		83	1,848
	Total	164	214	423	33,944

3.1.7 IR @INFLIBNET ([http:// iam. Inflibnet.ac in:8080/dxml/](http://iam.Inflibnet.ac.in:8080/dxml/))

The centre has established an institution repository called IR @INFLIBNET using Dspace, an open source software accessible at [http:// iam.Inflibnet.ac in:8080/dxml/](http://iam.Inflibnet.ac.in:8080/dxml/). The papers published in CALIBER and PLANNER proceedings are uploaded into the repository in PDF format. The Repository also includes course materials, newspaper clippings, etc. The repository has 1012 full-text articles.

3.1.8 Special Drive for North Eastern (N.E) Region

Besides organizing the annual convention PLANNER (Planning for Library Automation and Networking for North Eastern Region), a special drive for automation of college libraries in the North Eastern region was initiated as per the directives from Prime Minister's Office. The Centre has distributed SOUL software to 145 college libraries under the programme with free five days training to their representatives. Besides, the Centre has also appointed a SOUL Coordinator for North- Eastern region to provide proactive assistance to existing SOUL users in the region.

With switching over of internet Service Provider from ERNET India to BSNL w.e.f. 1st April 2010, Internet connectivity for most of the universities in North-eastern region has been increase from 2 Mbps to 10 Mbps (1:1). Moreover all universities in North-eastern region are getting access to all e-resources subscribed under the UGC-Infonet Digital Library Consortium from January 2010 onwards. NeRCat, sub-sect of IndCat, is designed and implemented to restrict searching of bibliographic records to 8 university libraries in North-eastern region so as to promote resource sharing amongst North-eastern universities.

Lastly, the Centre has recently launched 'Attachment Training Programme'(ATP) where-in working librarians and computer programmers from North East can join to the Centre and spend three to six months on ongoing projects with experienced INFLIBNET staff. The programme would benefit four library science professionals and four computer science professionals every year. The first trainee from Guwahati University, Guwahati is currently availing the benefits of the programme.

3.2 New Initiatives

The Centre has taken up several initiatives as described below with an aim to keep abreast with the trends and emerging technologies in information and communication technology (ICT).

3.2.1 N-LIST (National Library and Information Services Infrastructure for Scholarly Content) (<http://nlist.inflibnet.ac.in>)

The Project entitled “National Library and Information Services Infrastructure for Scholarly Content (N-LIST)”. Being jointly executed by the UGC-Infonet Digital Library Consortium, INFLIBNET Centre and the INDEST-AICTE Consortium, IIT Delhi, provides for 1)cross - subscription to e-resources subscribed by the two Consortia, i.e. subscription to INDEST-AICTE resources for universities and UGC – Infonet resources for technical institutions; 2)access to selected e-resources to 6,000 colleges. The N-LIST project facilities access to e-resources to students, researchers and faculty from colleges through proxy server(s) installed at the INFLIBNET Centre. The authorized users from colleges can now access e-resources and download articles required by them directly from the publisher’s website once they are duly authenticated as authorized users through servers deployed at the INFLIBNET Centre.

As on July 1st, 2010, a total number of 1248 colleges have registered themselves with the N-LIST programme including 754 Govt./ Govt. aided colleges covered under the 12 (B)and 2 (F) Section of the UGC Act. Remaining colleges are being advised to join the initiative as N-LIST Associate. All e-resources subscribed for colleges under the N-LIST Project, including 2,100 electronic journals, 51,000 electronic books and a bibliographic database called MathScinet, are now accessible to all the authorized users through the N-LIST website using Log-in ID and password issued to all the authorized users of 754 colleges.

3.2.2 Sodhganga: Indian Electronic Theses and Dissertations (<http://sodhganga.inflibnet.ac.in>)

Electronic themes and Dissertations (ETD) are known to be the rich and unique source of information, often the only source for research work that does not find its way into various publication channels. However, theses and dissertations remain an un-tapped and under-utilized asset, leading to unnecessary duplication and repetition that, in fact, is the anti-theses of research and wastage of huge resources, both human and financial.

The “Sodhganga” is a Digital Repository set-up for submission of electronic version of theses and dissertations by students/ research scholars in universities in India for making

them available in open access to the world-wide academic community. The Repository was set-up in response to the UGC Notification (Minimum Standards & Procedure for Award of M.Phil / Ph.D Degree, Regulation, 2009) where-in the responsibility of maintaining the digital repository of Electronic Theses and Dissertations (ETDs) is assigned to INFLIBNET Centre, Ahmedabad. Based on the recommendation of the National Committee for Implementation of Submission and Access Electronic Theses and Dissertation in Universities in India, constituted by the INFLIBNET Centre, work-flow, structure, data format, submission process, etc, were finalized. The Centre has modified ingestion interface of open source institutional repository software for meeting the specific requirement of Sodhganga. The Sodhganga Website provides all information relevant to the students, research supervisors and university authorities with regard to ETDs including their responsibilities, access policies, submission process, metadata structure, etc. an MoU to be signed between universities and INFLIBNET Centre is being sent to the universities for granting non-exclusive rights to host the content in the Sodhganga Repository as well as for getting financial assistance towards digitization of backfiles of theses/dissertations in universities.

Students from different universities have started submitting electronic version of their theses into the repository on voluntarily basis. So far, five universities have submitted their theses without formal request. MG University is the first University to sign the MoU with INFLIBNET Centre. The MG University has already given electronic version of their 550 theses for hosting them into the Sodhganga.

3.2.3 Shibboleth-based Access Management system

Access management, variably called access control, licensing conditions and digital Right Management (DRM), refers to control of access to digital collections. Digital Rights Management (DRM) is a system of solution created or designed as a mean to prevent unauthorized access duplication and illegal distribution of copyrighted digital media. In online environment, the scope of DRM can be leveraged to control access to and usage of digital objects and to impose restrictions on their misuse.

The INFLIBNET Centre, as one of its core mandates, provides access to scholarly E-resources to universities and colleges in India under the UGC-INFONET Digital Library Consortium and N - LIST programme. The Centre is keen to optimize the utilization of e-

resources so as to ensure better return on investment (RoI) and greater benefit to the academic community. At present, access to e-resources in universities is IP - authenticated and as such access is restricted within the confine of a given university campus due to lack of proper authentication mechanism.

The Centre is working towards deploying appropriate access management tools, enabling users to access e-resources from his/her campus, home or even while travelling. Implementation of such a solution requires setting-up of proper user authentication and access control mechanism ensuring trust relationship between publisher, identity provider agency and the user institution. The Centre is working towards implementing Shibboleth System which is open-standard based, open source software for web-based single sign-on across or within organization boundaries. It allows sites to make informed authorization decision for individual access of protected online resources in a privacy- preserving manner. Using this technology, user can access designated electronic resources within institute as well as campus. The Centre is working towards implementation of Shibboleth-based access management system for all e-resources and for all its member institutions including colleges and universities.

3.2.4 Open Journal System@ INFLIBNET(<http://www.inflibnet.ac.in/ojs>)

The INFLIBNET Centre has installed and configured Open Journal System (OJS), an open source solution developed by the Public Knowledge project, on servers at INFLIBNET to facilitate hosting of electronic version of journals into open access mode with all processes of submission, peer-reviewing, editing, layout designing and publishing but into it. The initiative, named “OJS@INFLIBNET”, encourages universities and institutions that are publishing journals in print format to use the OJS@ INFLBNET for hosting electronic version of their journals free –of-cost on servers at the INFLIBNET Centre. The initiative also encourages faculty in universities to start their own open access journals using that platform offered by the INFLIBNET Centre. Currently Open Journal System @ INFLBNET hosts two journals namely “Journal of Literature, Culture and Media Studies” published by Prof. NDR Chandra, Head , Department of English, Nagaland Central University and “Assam University Journal of Science and Technology” in two parts, namely, “Biological and Environmental Sciences: and “Physical Sciences and Technology” published by Assam

University Press, Silchar under the editorial guidance of Prof. GD Sharma, Dean, School of Life Science, Assam University, Silchar. The Centre has received a few more requests from faculty in universities. These journals are being assessed for their quality.

3.2.5 Open Source Software R & D

Open source software are computer programme where source code is made available to the general public for use and /or modification from its original design free charge. Open source programmes are typically created as a collaborative effort in which programmers improve upon the code and share the changes within the community. There are a number of open source software in the field of library and information science that are available free-of cost. The Centre has created R & D facilities and working groups to study and contribute actively in their development. Recently, R&D Group of the Centre has contributed couple of utilities to the open source community; CCF to MARC 21 Conversion Utility and Excel of MARCXML Conversion Utility. Both the utilities are available for download on the sourceforge.net website and the website of the INFLIBNET Centre at download link.

3.3 Web 2.0 and Library 2.0 @INFLIBNET

The INFLIBNET Centre has entered the world of Web 2.0 and Library 2.0 with the implementation of the following interactive and collaborative technological tools. All the web 2.0 tools used are open source software.

3.3.1 Instant Message

The Centre is using Google Talk for supporting users of SOUL Software. The users of SOUL Software can log on to Google chat at soulhelp007@gmail.com and enter into a chat session with dedicated and qualified team of professionals trained in SOUL Software for resolving their problems in a real-time mode.

3.3.2 RSS Feeds(<http://www.inflibnet.ac.in/feed/>)

The centre had developed RSS Aggregation Service on its website target to users of UGC-Infonet Digital Library Consortium. The RSS Aggregation Service facilitates RSS feeds to open on the website of the Centre for all electronic journals that are covered in the Consortium and have option for RSS feeds. Resultantly, the users, instead of copying RSS feeds into their RSS Feed Readers, can visit the INFLIBNET website and read the current content of all the journals subscribed under the UGC - Infonet Digital Library Consortium. These RSS Feeds are arranged according to subject categories as well alphabetically. Moreover, Journals covered under the RSS Feed Aggregators Service can also be searched according to the subject category as well as by words in journal titles.

3.3.3 Blogs ([Http:// www.inflibnet.ac.in/blog](Http://www.inflibnet.ac.in/blog))

The INFLIBNET Centre is proactively started its blog to encourage interactions amongst users and the INFLIBNET staff. The blog is also being for promoting activities and services of the Centre. The blog is updated regularly and provides useful information on higher education ICT applications, library and INFLIBNET Centre.

3.3.4 Wiki (<Http://www.inflibnet.ac.in/wiki>)

The INFLIBNET Wiki provides detailed information on its activities, functions and services. Moreover, the users of the Centre are also encouraged to the Wiki with their contents and suggestions on our services and activities.

3.3.5 Streaming Media and Social Network (<http://in.youtube.com/inflibnet>)

The Centre uses “YouTube” to upload multimedia video files. All the events held at INFLIBNET Centre are recorded and its content is uploaded on to the YouTube for the benefit of the users.

3.3.6 Application Programming Interface (API)

A new Application Programming Interface (API) has been developed and implemented as a front-end to interact with union databases for books, serials and theses stored in MS SQL as back-end database using JAVA, JSP, Servlet, Ajax technologies. The interface also facilitates universities to restrict their searches to their own collections.

3.3.7 Library Tool Bars

The INFLIBNET Centre has developed toolbar that facilitates easy access to e-resources, union databases, SOUL and other important links on INFLIBNET web site.

3.4 Projects @ INFLIBNET Centre

The INFLIBNET Centre has executed the following four projects recently:

3.4.1 N-LIST

The N-LIST funded by the Ministry of Human Resource Development (MHRD) under its National Mission on Education through ICT provides for cross-subscription to e-resources amongst universities and technical institutions, i.e. subscription to INDEST – AICTE resources for universities and UGC –Infonet resources for technical institutions as well as for subscription to selected e-resources for colleges. Current status and future projections of the project is given under “New Initiatives”

3.4.2 Gujarat University Library Automation Project

The INFLIBNET Centre was awarded the project of automation of the Gujarat University Library during X Plan period. The data entry for more than 3 lakhs records, sticking barcode labels, spine labels and book card printing were successfully completed. Phase II of the project that involves retro- conversion of 60,000 documents, sticking barcode

labels, spine labels and book card printing is being executed currently. All operation, including book database, has been migrated to SOUL 2.0.

3.4.3 Trends in Higher Education: Creation and Analysis of Database of Ph.Ds in the Country: NIAS-INFLIBNET Joint Project

The INFLIBNET Centre, in collaboration with NIAS (National Institution of Advanced Studies), Bangalore took a joint project on “Trends in Education: Creation and Analysis of a Database of PhDs” funded by the Tata Consultancy Services. Under the project, bibliographic records of the PhD. theses from 1998 to 2007 were analysed to find trends in higher education for 10 years in terms of distribution of researchers by gender, subject, region and language. Project has since been completed and submitted to the funding agency. The report of the project is available with Dr. Anitha Karup, Associate Professor, NIAS, IISc Campus, Bangalore.

3.4.4 Evolving a Consortium for providing Access to Electronic Resources to Colleges and Social Science Research Institution in selected Regions in India: Strategic Planning and Implementation strategies, Project funded by the Sir Ratan Tata Trust (SRTT)

The INFLIBNET Centre took the project entitled “Evolving a Consortium for providing Access to Electronic Resources to colleges and Social Science Research Institutions in selected Regions in India: Strategic Planning and Implementation Strategic Planning and Implementation Strategies” from Sir Ratan Tata. The Centre had selected 40 colleges from different districts of Maharashtra state. These colleges were selected based on the existing network infrastructure in the Campus, PhD programme, No. of PG and UG enrolment, number of faculties, etc. The other parameters for selection of colleges were CPE status and NAAC accreditation (A and A++ grade). The project has since been completed and report has been submitted to the Sir Ratan Tata Trust (SRTT) for implementation.

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CHAPTER 4

**Use of E-Resources provided by
UGC-INFONET Digital Library Consortium**

4.1 Introduction

Electronic resources, in reality have become the backbone of many academic organizations. The awareness and use of electronic resources by faculty members depends mainly on skills of each individual to locate discrete knowledge elements. Information explosion has increase the amount of electronic information sources available on the web. E-resources help to expand access, increase usability and effectiveness and establish new ways for individuals use information to be more productive in their endeavors. Awareness of e-resources may aid the users in keeping abreast with current developments in their respective subject fields, in contrast with print media. E-resources can be relied upon for timely information which upholds the quote: right information to right user at the right time. Besides, electronic resources provide easy, multiple and remote access, variety of contents with less costs.

E-Resource refers to the use of information technology in the production of publication and also in the electronic distribution of text via computer terminals. E-resources are playing an important and significant role in the creation, transmission and storage of information. Almost all publication and important documents which are published in print form are now being made available in digital form.

4.2 Types of E- Resources

The National Centre for Science Information (NCSI) has categorized the information resources available via the internet as:

4.2.1 Primary Sources of Information

- Electronic Conference
- Courseware/Tutorials/Guides/Manuals
- Patents
- Electronic Preprints and E-prints
- Projects (Ongoing and completed)
- Science/Research News

- Software
- Technical Reports
- Electronic Theses and Dissertations

4.2.2 Databases, Data Sets and Collections

- Abstracting and Indexing Databases (Bibliographic Databases)
- Citation databases
- Digital Collections (Images, Audio, Video)
- Equipment/Product Catalogues
- Scientific Data Sets (Numeric, Property, Structural Databases)
- Library catalogues (including Union Catalogues)
- Museum and Archives
- Virtual Libraries

4.2.3 Electronic Books, Online Book Selling and Print-on-Demand

- Electronic Books
- PDAs and Pocket PCs
- E-Books on the web
- Questia: the Online Library
- Ebrary
- NetLibrary
- Online Book selling
- Print-on-Demand

4.2.4 Reference Sources

- Dictionaries
- Electronic Encyclopedia
- Biographies

- Acronyms and Abbreviations
- Thesauri and Subject Headings
- Handbooks and Manuals
- Maps

4.2.5 Organizations and People

- Employment
- Funding/Grant Sources
- Libraries/Information Centers
- Organizations/Research Institutes/ Companies/ Societies
- People/Experts/Scientist Dictionaries

4.2.6 Meta Resources

These are known as guides to Internet information resources directing users to all kind of information resources. Meta resources, variably called subject gateways, subject-based information gateways (SBIGs), subject-based gateways, subject-index gateways, virtual libraries, clearing houses, pathfinders are facilities that allow easier access to network-based resources in a defined subject area.

4.3 Terms and Conditions of the Agreement for Access to E-resources for the Members of the UGC-INFONET Digital Library Consortium

The licenses are expected to incorporate the following terms and conditions in their agreements. The UGC-Infonet Digital Library Consortium and its member Institutions is term as “**Subscriber**”, and the publisher/service provider is termed as “**Licensor**”. The member institutions in the UGC-Infonet Digital Library Consortium are categorized in the following three phases:

- i) Phase I: **50**
- ii) Phase II: **50**
- iii) Phase III: **81**
- iv) Associate Members: to be enrolled

Total: **181**

4.3.1 Access

- Access and number of simultaneous use to e-resources including e-journals and online bibliographic databases of a Licensor shall be provided to the member institutions as specified in the tender document.
- In case there is a limit in number of simultaneous access, the total number of simultaneous access would be pooled for core member institutions in a given category which can be used by any member of the core member institution, depending upon extent of usage. However, a minimum number of accesses would be maintained for each institution.
- The Licensor shall provide IP-enabled access to the member institutions to their e-resources. The institutions that do not have static IP address would be given log-in/password based access to e-resources.
- The licensor shall provide search, browse, view and download facilities. The licensor will allow inter-library loan for print/ softcopy of articles from their licensed e-resource on “not-for profit” basis.
- Licensor shall provide usage statistics report on monthly basis to the headquarters of the Consortium as per details provided under Para 9.0.
- The user shall be bonafied employee, faculty, student, researcher (full-time/ part-time), alumni members and corporate members of the institutes and that number shall be unlimited. Use shall be allowed unlimited access (preferably), view, search, browse, download and print the data for their use. Walk-in visitors who

are physically present at the subscriber's site should also be allowed to use the resources.

- UGC-Infonet Digital Library Consortium at the INFLIBNET Centre shall be the implementing agency of the consortium.
- The publisher would provide access to the new title added during the contact period at no additional charge.
- Subscribe may provide electronic links to the licensed materials from their websites at journals level and licensor should provide help in doing so.
- Consortium members should be allowed to download bibliography records and abstract in their local database (especially records for publications from their own faculty, staff and students) and full-text articles published by their faculty/students in their Institute's e-print archives.

4.3.2 Payment

- Subscriber understands that different publishers/license/service provider have different pricing models. So, the fee for the access of e-journals shall be arrived differently depending on pricing model through mutually negotiable agreement.
- The payment would be released only after receipt of "access-enabled" certified from each subscriber. Multiple year agreements will be invoiced annually.
- Whenever the agreement is entered into, the payment computation will be on "prorate basis" with effect from the date of contract entered into for remaining period may also be extended into non-calendar year, if mutually agreed.
- If the payment is to be made in Indian currency to the representative of the publisher in India, the currency conversion shall be done on the TT bank selling rate as prevailing on the date of publisher's invoice.

4.3.3 Tenure

- Quotes for subscription to e-resources are invited for a period of five years, i.e., 2006 to 2011. The licensor may provide change in rate of subscription over this period.
- The agreement shall commence on the date of providing access and continue on annual basis or for a period as decided by the Subscriber.
- Multiple-year agreements will automatically be renewed for successive one-year term unless either party gives notice of minimum one month to the other party in writing.

4.3.4 Back-issue rights

- The licensor shall provide access to all e-resources with back volumes/date with a minimum period of five years base (calendar year) of full text of all the titles.
- The new title or titles added during the contract period shall be provided at no additional charge along with their back issues.
- Back-issues access would be provided for titles that are discontinued or merged with other titles during the contract period.

4.3.5 Archival Policy

- The perpetual access to e-resources for the period of subscription along with their back files offered during the subscription period would be preferred. In case, the resource is licensed on print based subscription, perpetual access should allow cross-sharing of subscribed resources amongst all subscribe.
- On completion of every year, the publisher would provide the full-text of e-resources (e-journals/e-databases) for that year on prevalent formats, i.e., CD-

ROM/DVD-ROM to the headquarters of the UGC-Infonet Digital Library Consortium at INFLIBNET Centre with the retrieval software for access on the network.

- In case of termination of the agreement or on the expiry of the agreement, the Licensor shall provide the full text of the e-journals or e-databases for the period of agreement on the network access to all the members of the Consortium.
- In case of change in archival technology, the state-of-art archival technology shall be made available by the Licensor to subscribe at no extra cost for archival of full text data of e-journals to higher version of technology as and when it arrives.

4.3.6 Awareness Building and User Support

- Licensor will inform members of the UGC-Infonet Digital Library Consortium about their user's meet/seminars to be organized in the country/in the region well in advance to enable the subscriber to participate free of cost in the event.
- Licensor will provide adequate number of publisher's publicity material, brochure, posters and user support material in both prints as well as on CD form, as applicable.

4.3.7 Training

- The Licensor will conduct 'Train-the-Trainer' sessions for at least two library and information science professionals per member institution at ten locations to be named by the UGC-Infonet Digital Library Consortium from time to time.
- The Licensor shall, however, not be responsible for the travel and related costs of the librarians and information specialists for attending such training programmes.

- The Licensor will provide the ‘Train the Trainer’ programme in the consolidated training programme along with the other publishers, if required. Subscriber will inform Licensor, the schedule of such training Programme.
- The subscriber will not pay any charges to licensor for ‘Train the Trainer’ Programme towards travel/stay.etc.
- Licensor will provide sufficient copies of the course manual in electronic and printed form at their own cost.
- Licensor will inform the address and contacts details of the ‘Train the Trainer’ to Subscriber/member institutions for any help required by the use.
- UGC-Infonet Digital Library Consortium Headquarters/member institutions will identify the user institutes, who will provide audio visual facility, venue and hospitality for train-the-trainer programme.

4.3.8 Usage Statistics

Licensor shall be required to submit the following ‘COUNTER’ complaint usage/statistics:

- No. of downloads, both full-text and abstracts; done by the member institutions monthly and cumulatively by participating member institute.
- Data at (9.1) above shall be provided for
 - * Current month
 - * Previous month
 - * Cumulative for the current year
 - * Cumulative for the previous year(s)
- Data as at (9.1) & (9.2) above shall be provided for each journal.

- In case of any discontinuation or gap, the publisher shall inform the reason and the origin of discontinuation/gap.
- The designated technical/administrative contacts from member institutions of the Consortium as well as Consortium Headquarters shall be given access to the publisher's server/database, where usage statistics is hosted. Licensor shall allow access to download the statistics to two designated staff in each member institution. This access to the designated use of members of the Consortium shall be password regulated and such use will have the privilege to download statistics with respect to their institutions. In case of Consortium Headquarter, Licensor will ensure the complete access to usage statistics in respect of all Member Institutions.

4.3.9 General Terms and Conditions (GTC)

- In the event that access to E-journals is stopped from the Licensor's end due to any problem, subscriber/member institution, etc. shall be allowed access for the same period/time as the breakdown, after the term of the contract or subscriber shall deduct the proportionate amount from the fees payable to the Licensor or the licensor shall refund the proportionate amount to the subscriber.
- A notice of one month shall be provided by either side in the event of termination of contract.
- If the licensor sells or otherwise transfers ownership of e-journals to another licensor it will provide non-exclusive copy along with of volumes in published and make it available through the licensor's site to subscriber. In case it does not happen, the amount shall be proportionately refunded to the subscriber.
- The UGC-Infonet Digital Library Consortium and its member institutions recognize the following obligations on its part:
 - 1) Maintaining the integrity of licensed products; and

2) Ensuring access to and use of licensed products is limited to authorized use.

- The subscriber shall not be responsible for any sales tax, VAT or other taxes or any license fee or any other hidden cost except the agreed invoiced amount.
- The agreed terms and conditions can't be altered without mutual consent of both the parties.
- Licensor will have to identify the subscriber for losses/claims/compensation caused raised by third party with regard to the contract.
- The licensor liability to subscriber shall be to a sum equal to the fee paid by subscriber if things go wrong on the part of Licensor.
- The subscriber shall not be liable for breach of any of the terms of the agreement by any authorized user provided that subscriber did not intentionally assist in or encourage such breach or permit such breach to continue after having noticed thereof provided reasonable cooperation to licensor(s) to prevent misuse.
- Any kind of breach of agreement as a result of conditions beyond control such as a war, strike, fire, flood, governmental restrictions, power failures, damage, or destruction, act of God shall not be deemed as a breach of the contract agreement.
- In case of closure or merge of any of the member institution, the print subscription of the particular member institution(s) will not be maintained.
- In case of closure or merger of any of the member, the respective subscription/access costs will not be taken into account for payment or another fee chargeable by the licensor.
- In case, access fee is based on the print subscriptions cost model, the year of signing the agreement will be base year for taking the print subscriptions cost into account to compute the access fee payable to licensor.

- The publisher would not discontinue the access to e-resources on account of excessive downloads at subscriber's end. Instead, the publisher should devise mechanism to check excessive simultaneous downloads using robots or other mechanism. The publisher may also inform threshold for abuse of e-resource in terms of maximum number of downloads.

4.3.10 Governing Laws and Jurisdiction

- The contract agreement shall be governed by the laws of India.
- All disputes arising under the contract agreement shall be settled under the rules of the international arbitration court by one or more arbitrators in accordance with the said rules. The place of the arbitration shall be in New Delhi (India) and carried out in the English Language.

4.4 E- Resources Provided by UGC Infonet Digital Library Consortium

4.4.1 Full Text E-resources

1. American Chemical Society:

The Publications Division of the American Chemical Society provides the worldwide scientific community with a comprehensive collection of the most-cited, peer-reviewed journals in the chemical and related sciences. As reported in 2008 Journal Citation Reports by Thomson Reuters, the peer-reviewed journals of the American Chemical Society rank no.1 in citations or ISI Impact Factor in the seven core chemistry categories as well as eight additional categories ranging from Agriculture and Crystallography to Polymer Science and Nanoscience & Nanotechnology. It provides features like Daily or weekly e-mail alerts when individual articles (Articles ASAPSM) from the selected journal(s) of your choice, are released on the web.

Through the consortium ACS is giving access to 38 current full-text e-journals including the ACS Legacy Archives having back files of all the journals from vol.1 issue.1

2. The American Institute of Physics (AIP) :

The American Institute of Physics (AIP) is a non-profit corporation chartered in 1931 to advance and diffuse the knowledge of physics and its application to human welfare. An umbrella organization for 10 Member Societies, AIP represents more than 134,000 scientists, engineers and educators and is one of the world's largest publishers of physics journals. AIP's prestigious core journals (journals.aip.org) - many of which are among the most highly cited in their field - form the core of physics literature in libraries worldwide. With their high technical and editorial standards, these publications attract the most vital and current research papers from the world's leading authorities in fields ranging from chemistry, mathematics, fluid dynamics, and more. AIP's online platform(Citation) hosts more than 1,000,000 articles from more than 170 scholarly publications for 25 learned society publishers, in fields including physics, chemistry, geosciences, engineering, acoustics, and more.

The members of the consortium have access to 18 Full text journals (10 AIP and 8 from AIP's member societies) with Archival access from 1997 onwards for most of the journals.

3. The American Physical Society :

The American Physical Society was founded on May 20, 1899, when 36 physicists gathered at Columbia University for that purpose. . In 1913, the APS took over the operation of the Physical Review, which had been founded in 1893 at Cornell, and journal publication became its second major activity. Physical Review was followed by Reviews of Modern Physics in 1929 and by Physical Review Letters in 1958. Over the years, Physical Review has subdivided into five separate sections as the fields of physics have proliferated and the number of submissions grew.

Through the consortium access of 8 Full text journals is available from 1997 onwards. Also the PROLA (Physical Review Online Archive) search engine (which indexes all APS journal material published from 1893 to present) is now freely available to all users.

4. Annual Reviews:

Annual Reviews was founded in 1932, Annual Reviews provides researchers, professors, and scientific professionals with a definitive academic resource in 37 scientific disciplines. Annual Reviews saves you time by synthesizing the vast amount of primary research literature and identifying the principal contributions in the field. Annual Reviews publications are among the highest cited publications by impact factor according to the Institute for Scientific Information (ISI).

Access is made available to 33 full text journals and archival access is provided up to 10 years back issues.

5. Wiley-Blackwell Publishing:

Wiley- Blackwell was created in February 2007 by merging Blackwell Publishing with Wiley's Global Scientific, Technical, and Medical business, is now one of the world's foremost academic and professional publishers and the largest society publisher. With a combined list of more than 1,400 scholarly peer-reviewed journals and an extensive collection of books with global appeal, this new business sets the standard for publishing in the life and physical sciences, medicine and allied health, engineering, humanities and social sciences.

Access to 908 journals of Blackwell publishing with back files since 1997 is being provided to the members of the consortium.

6. Cambridge University Press:

In line with the commitment of Cambridge University Press to advance learning, knowledge and research worldwide, the Press currently publishes over 220 peer-reviewed academic journals for the global market. Containing the latest research from a broad sweep of subject areas, Cambridge journals are accessible worldwide in print and online. As well as those journals owned by the Press itself, it also publishes on behalf of over 100 learned and professional societies.

Through the consortium, 224 Cambridge University Press journals are available with back files since 1997.

7. Elsevier Science:

ScienceDirect is a part of Elsevier. Headquartered in Amsterdam, The Netherlands, the company is the world's largest scientific, technical and medical information provider and publishes over 2,000 journals as well as books and secondary databases. There are currently more than 9.5 million articles/chapters, a content base that is growing at a rate of almost 0.5 million additions per year.

Access to Science Direct 10 subjects (1. Biochemistry, Genetics & Mol. Biology,2. Agriculture & Biological Science,3. Chemistry4. Computer Science,5. Economics,6. Immunology & Microbiology, 7. Mathematics,8. Physics & Astronomy,9. Social Sciences,10. Psychology) collection (1000+journals titles) is provided to 60 universities covered under UGC-INFONET Digital Library Consortium with back-files since 1995.

8. Emerald:

For more than 40 years Emerald has operated as a specialist journals publisher, building a portfolio of 225 scholarly journals in business and management, library and information sciences, engineering and materials science. As the leading publisher for LIS research, Emerald's Library and Information Studies publications provide comprehensive and quality coverage in all areas of this field. Spanning a range of topics such as collection building to library finances, to document supply and inter-library lending, this is an essential resource for information professionals, librarians, educators, students and researchers around the world.

Under UGC-Infonet e-journals consortium access is made available for 29 e-journals from Library and Information Science full text database and archival access is varies from journal to journal (mostly 2001- onwards).

9. Economic & Political Weekly (EPW):

Economic and Political Weekly published by the Sameeksha Trust, a registered charitable trust since 1949, is one of the Indian publications that enjoy a global reputation for excellence and scholarship. It occupies a special place in the intellectual history of independent India. It publishes analysis of contemporary affairs and academic papers in the social sciences. The focus of the EPW is economic issues, but it is truly a multidisciplinary publication covering sociology, political science, history, gender and environment studies. EPW publishes both research in social sciences in the “Special Articles” Section and informed comment on current affairs in the “Commentary Section”. The access of EPW is provided to all the universities of the consortium.

10. HeinOnline:

HeinOnline is Heins premier online research product with more than 60 million pages of legal history available in an online, fully-searchable, image-based format. HeinOnline bridges the gap in legal history by providing comprehensive coverage from inception of more than 1,400 law and law-related periodicals. In addition to its vast collection of law journals, HeinOnline also contains the Congressional Record Bound volumes in entirety, complete coverage of the U.S. Reports back to 1754, famous world trials dating back to the early 1700's, legal classics from the 16th to the 20th centuries, the United Nations and League of Nations Treaty Series, all United States Treaties, the Federal Register from inception in 1936, the CFR from inception in 1938, and much more.

11. The Institute of Physics:

The Institute of Physics is a leading international professional body and learned society, established to promote the advancement and dissemination of physics. The Institute has a world-wide membership and is a major international player in: scientific publishing and electronic dissemination of physics; setting professional standards for physicists and awarding professional qualifications; promoting physics through scientific conferences, education and science policy advice.

Access is provided to 46 full text topmost journals in the area of physics, and the archival access is made available from Vol.1 issue.1 of all 46 IOP titles.

Access is made available to 14 National Law Schools through UGC-INFONET Digital Library consortium.

12. JSTOR:

JSTOR was founded in 1995 to build trusted digital archives for scholarship. Today, we work with the scholarly community to preserve their work and the materials they rely upon, and to build a common research platform that promotes the discovery and use of these resources. In 2009, JSTOR merged with and became a service of ITHAKA, a not-for-profit organization helping the academic community use digital technologies to preserve the scholarly record and to advance scholarship and teaching in sustainable ways. The majority of content in the archive is journal literature, though inclusion of other materials such as conference proceedings, transactions, pamphlets, monographs, manuscripts, and other materials is growing.

Currently, there are 1681 titles, including previous titles, as well as other content available. New titles and other materials are being added regularly.

13. Manupatra:

Manupatra are the leading law publishers and provider of Legal, Taxation, Corporate and Business Policy databases in India. With primary documents and proprietary analytical content covering commentaries, treaties, digests, editorial enhancements, Manupatra has created the largest and most comprehensive online resource of Indian materials.

Access is made available to 14 National Law Schools through UGC-INFONET Digital Library consortium.

14. Nature Journal:

With weekly periodicity, Nature is an international journal publishing original, groundbreaking research spanning all of the scientific disciplines, as Articles, Letters to Nature and Brief Communications. Each issue also includes extensive secondary comment, including Reviews, News, New Features, Essays, News and Views, Book Reviews, Correspondence, Commentary, and Opinion. Nature has the highest Impact Factor (Thomson-ISI, 2003) of all multidisciplinary journals, and has achieved an increase of 2.5 since 2002. Nature has also received acclaim for having the highest number of citations per paper over the last decade (1992-2002) of all multidisciplinary journals (Science Watch, Thomson-ISI, June 2003).

1 full text unlimited simultaneous access for Nature Weekly from 1997 onwards is available.

15. Oxford University Press:

Oxford Journals is a division of Oxford University Press, which is a department of Oxford University. It publishes well over 230 academic and research journals covering a broad range of subject areas, two-thirds of which are published in collaboration with learned societies and other international organizations. OUP collections cover Life Sciences, Mathematics & Physical Sciences, Medicine, Social Sciences, Humanities, and Law, and include some of the most authoritative journals in their fields.

Through the consortium, 198 Oxford University Press journals are available with back files since 1998.

16. Portland Press:

Portland Press Limited is the wholly owned publishing subsidiary of "The Biochemical Society". It is a not-for-profit publisher of journals and books in the cellular and molecular life sciences. .

Access to 8 peer-reviewed journals is being provided to the member universities with 1996 onwards backfiles.

17. Project Euclid:

Project Euclid's mission is to advance scholarly communication in the field of theoretical and applied mathematics and statistics. Project Euclid is designed to address the unique needs of low-cost independent and society journals. Through a collaborative partnership arrangement, these publishers join forces and participate in an online presence with advanced functionality, without sacrificing their intellectual or economic independence or commitment to low subscription prices. Full-text searching, reference linking, interoperability through the Open Archives Initiative, and long-term retention of data are all important components of the project.

Access to 18 journals with 2002 onwards back volumes is being provided to 50 member universities.

18. Project Muse:

Project Muse is a unique collaboration between libraries and publishers, providing 100% full-text, affordable and user-friendly online access to a comprehensive selection of prestigious humanities and social sciences journals. MUSE's online journal collections support a diverse array of research needs at academic, public, special and school libraries worldwide. Our journals are heavily indexed and peer-reviewed, with critically acclaimed articles by the most respected scholars in their fields. MUSE is also the sole source of complete, full-text versions of titles from many of the world's leading university presses and scholarly societies.

Currently, MUSE provides full-text access to current content from over 400 titles representing nearly 100 not-for-profit publishers.

19. The Royal Society of Chemistry:

The Royal Society of Chemistry (RSC) is the Professional Body for chemists and the Learned Society for chemistry. It is one of the most prominent and influential independent scientific organizations in Britain. Through its 45,000 members, including academics, teachers and industrialists, the RSC promotes the interests of chemists and the benefits of chemical science. The RSC's educational activities provide information and training opportunities for both students and teachers. The RSC is extremely active in determining the future of chemical education, seeking to influence Government by submitting evidence to Parliament and anticipating developments in education policy.

The archival access is made available for 23 full text journals with 6 Databases from 1997- onwards.

20. SIAM:

Inspired by the vision that applied mathematics should play an important role in advancing science and technology in industry, a small group of professionals from academe and industry met in Philadelphia in 1951 to start an organization whose members would meet periodically to exchange ideas about the uses of mathematics in industry. This meeting led to the organization of the Society for Industrial and Applied Mathematics (SIAM). SIAM exists to ensure the strongest interactions between mathematics and other scientific and technological communities through membership activities, publication of journals and books, and conferences.

Access to 14 Journals with 1997 onwards backfiles is made available to 50 member universities.

21. Springer Link:

Springer is the leading global scientific publisher, delivering quality content through innovative information products and services, as well as a trusted provider of local-language professional publications in Europe, especially in Germany and the Netherlands. It publishes

high quality content in various formats like books, journals, newsletters, CD-ROMs, online platforms, protocols, databases and conferences.

It publishes some 2,000 journals and more than 6,500 new book titles every year in the STM sector; backlist of more than 45,000 titles. The coverage of the content is in 6 main publishing fields: science, technology, medicine, architecture, business and transport.

Overall journals can be accessed through SpringerLink are around 1400 journals. The archival access is provided from 1997 onwards.

22. Taylor and Francis:

Taylor and Francis, founded in 1798, is the oldest commercial journals publisher in the world, and one of the leading global academic publishers. Informa interface is a new and expanding platform, initially hosting the academic and scientific publications. Taylor & Francis Group publishes more than 1100 journals and around 1,800 new books each year Taylor and Francis provides quality information and knowledge that enable the customers and end-users to perform their jobs efficiently, continue their education, and help contribute to the advancement of their chosen profession. It is a widely known publisher among researchers, students, academics and increasingly professionals. UGC-Infonet Digital Library Consortium can access more than 1365 journals with archival access to 1998 onwards issues.

23. Westlaw India:

Westlaw India contains an ever expanding collection of case law that is updated daily. Alongside Indian case law, Westlaw India also includes case law materials from the UK, EU, United States and other Commonwealth jurisdictions. Westlaw India contains over 300,000 full text decisions from 20 High Courts. Coverage starts from 1886 and case head notes are included for a large number of editorially selected judgments. Like the Supreme Court, every High Court judgment is supplemented with our unique Case Analysis documents enabling users to view a judgments' appellate history through seamless linking between High Court and Supreme Court decisions.

Access is made available to 14 National Law Schools through UGC-INFONET Digital Library consortium.

4.4.2 Bibliographic Data Base

1. SciFinder Scholar (Chemical Abstract Service)

CAS provides pathways to published research in the world's journal and patent literature virtually everything relevant to chemistry plus a wealth of information in the life sciences and a wide range of other scientific disciplines back to the beginning of the 20th century. Since 1907, CAS has indexed and summarized chemistry-related articles from more than 40,000 scientific journals, in addition to patents, conference proceedings and other documents pertinent to chemistry, life sciences and many other fields. In total, abstracts for more than 23 million documents are accessible online through CAS. SciFinder and SciFinder Scholar desktop research tools can be used to explore and search the CAS Substance identification is a special strength of CAS. SciFinder Scholar is a desktop research tool that provides campus-wide access to the world's largest and most comprehensive databases of chemistry, biotechnology, engineering, life sciences and related sciences from CAS, with an ease of use never before. With SciFinder Scholar as a one single source, you can explore scientific information in several unique ways.

The CAS access is given to 21 universities through Sci-Finder. The archival access is made available since 1907 onwards.

2. MathSciNet

MathSciNet is an electronic publication offering access to a carefully maintained and easily searchable database of reviews, abstracts and bibliographic information for much of the mathematical sciences literature. Over 80,000 new items are added each year, most of them classified according to the Mathematics Subject Classification. Authors are uniquely identified, enabling a search for publications by individual author rather than by name string. Continuing in the tradition of the paper publication Mathematical Reviews (MR), which was

first published in 1940, expert reviewers are selected by a staff of professional mathematicians to write reviews of the current published literature; over 60,000 reviews are added to the database each year. Extending the MR tradition, MathSciNet contains over 2 million items and over 700,000 direct links to original articles. Reference lists are collected and matched internally from over 300 journals, and citation data for journals, authors, articles and reviews is provided. This web of citations allows users to track the history and influence of research publications in the mathematical sciences.

Access to MathSciNet has started to 50 universities since 2005 covering files of 1940 onwards.

3. The Royal Society of Chemistry (RSC)

The Royal Society of Chemistry is the Professional Body for chemists and the Learned Society for chemistry. It is one of the most prominent and influential independent scientific organisations in Britain. Through its 45,000 members, including academics, teachers and industrialists, the RSC promotes the interests of chemists and the benefits of chemical science. The RSC's educational activities provide information and training opportunities for both students and teachers. The RSC is extremely active in determining the future of chemical education, seeking to influence Government by submitting evidence to Parliament and anticipating developments in education policy.

The archival access is made available for 23 full text journals with 6 Databases from 1997- onwards.

4. ISID

The Institute for Studies in Industrial Development (ISID), a sponsored institution of the Indian Council of Social Science Research (ICSSR), is a public-funded, non-commercial research and development institution in social science. ISID was set up as an independent organization to carry on the work initiated by the Corporate Study Group (CSG), at the Indian Institute of Public Administration, during the early 'eighties. ISID has developed databases

on various aspects of the Indian economy, particularly concerning industry and the corporate sector. It has created On-line Indexes of Indian Social Science Journals (OLI) and Press Clippings on diverse social science subjects.

It provides access to Indexes of 125 Indian Social Science journals and major newspaper articles, editorials and news features.

5. J-Gate Custom Content for Consortium (JCCC)

JCCC is a virtual library of journal literature created as a customized e-journals access gateway and database solution. It acts as a one point access to 7900+ journals subscribed currently under UGC INFONET Digital library consortium as well as university libraries designated as Inter Library Loan (ILL) Centers besides index to open access journals. INFLIBNET has identified 22 potential universities as ILL Centers in the country to fulfill ILL request from the users affiliated to universities covered under UGC- INFONET Digital Library Consortium.

JCCC has facility to trigger e-mail request for article to Inter Library Loan Centers as well as to INFLIBNET Centre.

6. Web of Science

Web of Science provides access to the world's leading citation databases. It searches over 10,000 journals from over 45 different languages across the sciences, social sciences, and arts and humanities with back files to 1900. The citations (or footnotes) allow one to navigate forward, backward, and through journal articles and both journal and book-based proceedings. Its Analyze Tool also helps in finding hidden trends and patterns, gain insight into emerging fields of research, identify leading researchers, institutions, and journals, and trace the history of a particular field of study.

The access to Web of Science is provided to 50 phase I universities of the consortium through the N-LIST Programme funded by MHRD.

4.4.3 Open Access Resources

1. Open Access

Open access is a publication model wherein neither a reader nor the reader's institutions are charged for access to articles or other resources. Users are free to read, download, copy, distribute, print, search, or link to the full texts of these articles.

The INFLIBNET Consortium encourages open access through institutional repositories in its member institutions.

2. Open Access E-journals

Directory of Open Access Journals lists 2376 Open Access E-Journals that are accessible full-text on the Internet. Most open access e-journals are accessible electronically only, whereas a few have their print version also.

3. Directory of Open Access Journals (DOAJ)

Open JGate provides article-level access to contents covered in open access journals. Moreover, there are few discipline-specific listings of free e-journals.

4. An institutional repository or e-print archive

An institutional repository is a digital repository of the research output of an institution that is usually accessible freely to end-users both within and outside of the institution.

A publicly accessible repository (archive) where all the work published by researchers/authors affiliated with the university/academy can be posted online.

4.5 List of E- Resources in different Subject

4.5.1 Social Science

- Annual Reviews
- Blackwell - Wiley
- Cambridge University Press
- JSTOR
- OJS@INFLIBNET
- OUP Archive
- Oxford University Press
- Project Muse
- ScienceDirect
- ScienceDirect Archive (Basic Sc Collection)
- Springer Link
- Taylor and Francis

4.5.2 Engineering Technology

- American Chemical Society
- Blackwell - Wiley
- Annual Reviews
- JSTOR
- Oxford University Press
- Project Muse
- Royal Society of Chemistry
- ScienceDirect
- ScienceDirect Archive (Basic Sc Collection)
- Springer Link
- Taylor and Francis

4.5.3 Medical Science

- Annual Reviews
- Blackwell - Wiley
- Cambridge University Press
- JSTOR
- OUP Archive
- Oxford University Press
- Portland Press
- Project Muse
- ScienceDirect
- ScienceDirect Archive (Basic Sc Collection)
- Springer Link
- Taylor and Francis

4.5.4 Library and Information Science

- Blackwell - Wiley
- Emerald (LIS Collection)
- JSTOR
- OUP Archive
- Oxford University Press
- Project Muse
- ScienceDirect
- Springer Link
- Taylor and Francis

4.5.5 Mass Communication

- JSTOR
- Taylor and Francis

4.5.6 Economics

- Blackwell - Wiley
- Cambridge University Press
- Economics & Political Weekly
- JSTOR
- OJS@INFLIBNET
- OUP Archive
- Oxford University Press
- Project Muse
- ScienceDirect
- ScienceDirect Archive (Basic Sc Collection)
- Springer Link
- Taylor and Francis

4.5.7 Business Management

- Blackwell - Wiley
- JSTOR
- OJS@INFLIBNET
- ScienceDirect
- ScienceDirect Archive (Basic Sc Collection)
- Springer Link
- Taylor and Francis

CHAPTER 5

Data Analysis and Findings

5.1 Introduction

UGC INFONET Digital Library Consortium is primarily launched to provide access to thousands of full text E-journals covering a wide range of disciplines for the Academic and Research work being carried at university level. Presently 181 Universities are members of UGC INFONET digital Library Consortium. In other words, the Consortium provides access to the academic world. This E-resources covers subjects like Arts, Humanities, Social Sciences, Physical Sciences, Chemical Sciences, Life Sciences, Computer Sciences, Management, Mathematics, Statistics etc. Mizoram University is one of the members of UGC INFONET Digital Library Consortium. As mentioned earlier, the Mizoram University comprises of 7 Schools and 28 Departments coming under the school of studies which are completely functions. The research topic under study covers only two schools namely (1) SEMIS (School of Economics, Management and Information Science) (2) SOS (School of Social Science). The School of Economics, Management and Information Science (SEMIS) comprises of 5 Departments namely Economics, Library and Information Science, Commerce, Management and Journalism & Mass Communication. Meanwhile the School of Social Science (SOS) comprises of 5 Departments namely Psychology, Public Administration, History & Ethnography, Political Science and Social Work.

The scholar has circulated 110 questionnaires to Faculty members and Research Scholars of these two Schools by following the method of Random Sampling. Out of the 110 questionnaires circulated, the scholar received 82 questionnaires which are analyzed and findings were drawn as stated as below:

5.2 Data Analysis

5.2.1 Department-wise Response from Faculty Members and Research Scholars

It is important to know that the total number of Faculty members and Research Scholars in each department covering four schools of studies. The response from the users could measure the effectiveness of Social Science related journals being provided by UGC INFONET Digital Library Consortium.

Table 1: Department-wise Response from Faculty Members and Research Scholars

Departments	Faculty Members	Research Scholars	Total	Questionnaire Circulated	Questionnaire Received
Economics	7	32	39	19	13
Commerce	6	17	23	12	10
Library & Information Science	7	10	17	13	12
Management	7	13	20	13	11
Journalism & Mass Communication	4	0	4	2	0
Political Science	4	12	16	10	6
Social Work	6	12	18	13	10
Public Administration	5	11	16	7	5
History & Ethnography	5	14	19	10	7
Psychology	5	15	20	11	8
Total	56	136	192	110	82

The above table shows that out of 110 questionnaires circulated, there are 82 questionnaires received from the respondents. Therefore, the response rate is 74.54% which is fairly enough for this study. It is also observed from the table that the maximum questionnaires have been received from the Department of Economics, Library and information Science, Management, Commerce and Social Work.

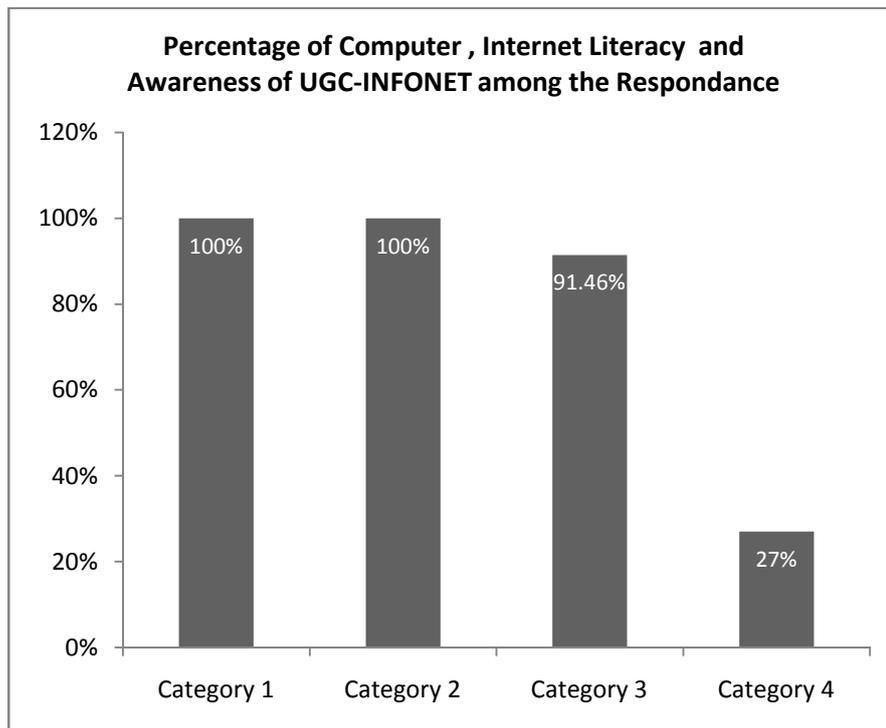
5.2.2 Respondents and their knowledge on Computer, Internet, UGC-INFONET and UGC-INFONET Awareness Programme

Universal access to Information can only be achieved if every citizen becomes Information Literate thereby using more and more E- resources available through World Wide Web. Therefore, every students, teachers and research scholars are expected to be

Computer and Internet literate, be aware of UGC INFONET Digital Library Consortium and participate in User Awareness Programme conducted by INFLIBNET so as to maximize the access and use of UGC INFONET Digital Library Consortium E-resources.

Table 2: Number and Percentage of Computer and Internet Literacy, awareness of UGC-Infonet among the respondents.

Knowledge on Computer, Internet and UGC-INFONET	Number of Literate	Percentage
Computer Literate	82	100%
Internet Literate	82	100%
Aware of UGC – Infonet	75	91.46%
User Awareness Programme Attended (Organized by DLIS MZU)	27	32.92%



Category 1: Computer Literate

Category 2: Internet Literate

Category 3: Aware of UGC-INFONET

Category 4: User Awareness Programme Attended (Organized by DLIS MZU)

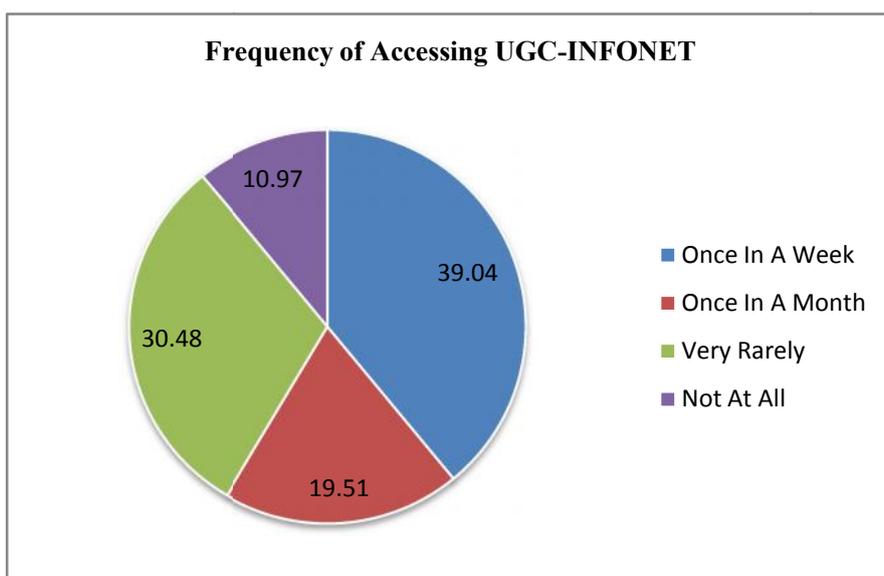
The above table shows that out of 82 respondents which mainly comprise faculty members and research scholars, 100 % of them are computer and Internet literate. 75 respondents (91.46%) are aware of UGC-INFONET Digital Library Consortium and 27 respondents (39.92%) have attended UGC-INFONET awareness programme organized by the Department of Library and information Science, Mizoram University.

5.2.3 Frequency of Accessing UGC-INFONET Digital Library Consortium

UGC-INFONET Digital Library Consortium being a major source of accessing E-journals by the academic and research community keeps on adding and deleting the most popular and renounce journal in the consortium. Therefore it is necessary on the part of the faculty members and research scholars to regularly access the consortium in order to keep them update about the new journal added. The table below explains the frequency of access to UGC-INFONET Digital Library Consortium.

Table 3: Frequency of Accessing UGC-INFONET Digital Library Consortium

Sl. No	Frequency of Use	Number Of Respondance	Percentage
1.	Once In A Week	32	39.04%
2.	Once In A Month	16	19.51%
3.	Very Rarely	25	30.48%
4.	Not At All	9	10.97%



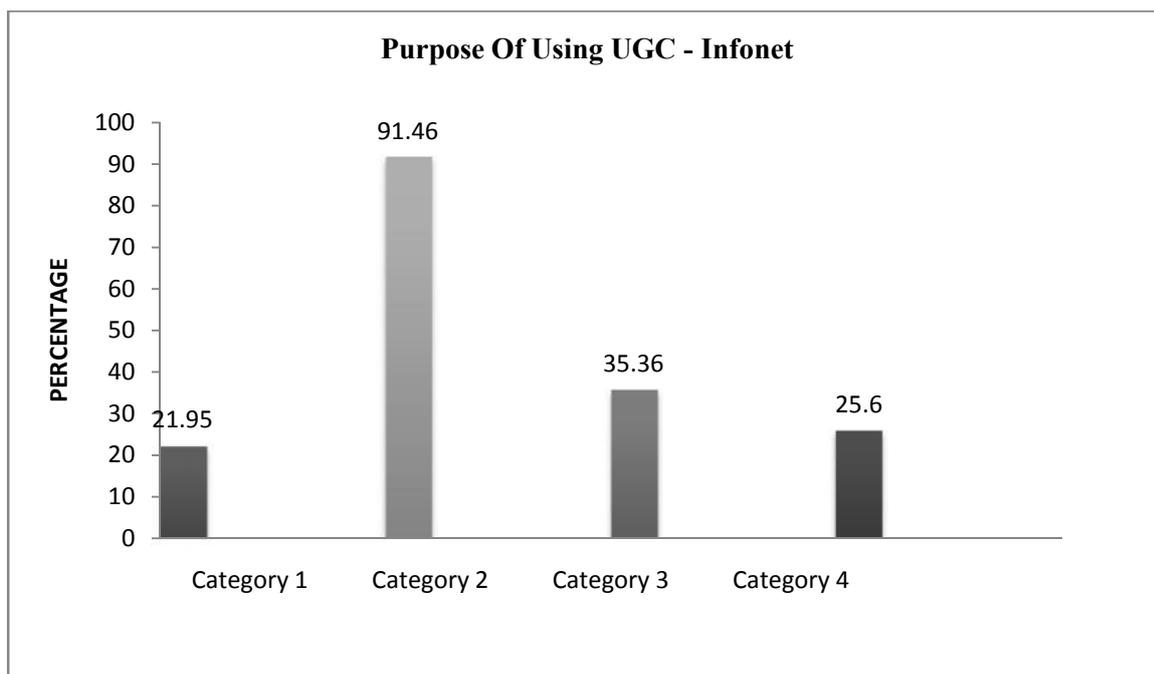
The above table shows that 32 respondents (39.4%) make use of the consortium once in a week and 16 respondents (19.51%) make use of the consortium once in a month. 25 respondents (30.48%) make very rare use and 9 respondents (10.97%) do not used at all.

5.2.4 Purpose of Using UGC-INFONET Digital Library Consortium

The quality of Academic and research work can only be improved if the Faculty members and Research Scholars can make use of national and international renounce journal articles which are considered as primary source of information which can be obtained through UGC-INFONET Digital Library Consortium.

Table 4: Purpose of Using UGC-INFONET Digital Library Consortium

Purpose	Number	Percentage
Classroom Teaching	18	21.95%
Research Work	75	91.46%
Writing Articles For Research Journals	29	35.36%
Writing Articles For Seminars And Conferences	21	25.60%



Category 1: Classroom Teaching

Category 2: Research Work

Category 3: Writing Articles for Research Journals

Category 4: Writing Articles for Seminars & Conferences

As it has been mention earlier, the UGC-INFONET Digital Library Consortium is primarily meant for Academic and Research work. It has been observed from the above table that 18 respondence (21.95%) make use of UGC-INFONET Digital Library Consortium for classroom teaching, 75 respondence (91.46%) make use for their research work, 29 respondence (35.36%) make use for writing articles for research journal while 21 respondence 25.60%) make use for writing articles for Seminars and Conferences.

5.2.5 Most Frequently Accessed Journal

The UGC-INFONET Digital Library Consortium launched by INFLIBNET is inconstant review of providing quality E-journal to the University Academic and Research fraternity. A number of E-journal vendors supply a good number of research journals pertaining to different disciplines. The 82 respondence used different type of journals and thus popularity through access is given in table below:

Table 5: Most Frequently Accessed Journal

The above depicts that JSTOR is the most popular E-resources which are used

Sl. No	Electronic Resources (E-Journals)	Number Of Use/Access	Percentage Of Use/Accessed
1.	JSTOR	21	25.60%
2.	Springer Link	18	21.95%
3.	Oxford University Press	17	20.73%
4.	Annual Reviews	8	9.75%
5.	Taylor & Francis	7	8.53%
6.	Cambridge University Press	5	6.09%
7.	Emerald	5	6.09%
8.	Blackwell	4	4.87%

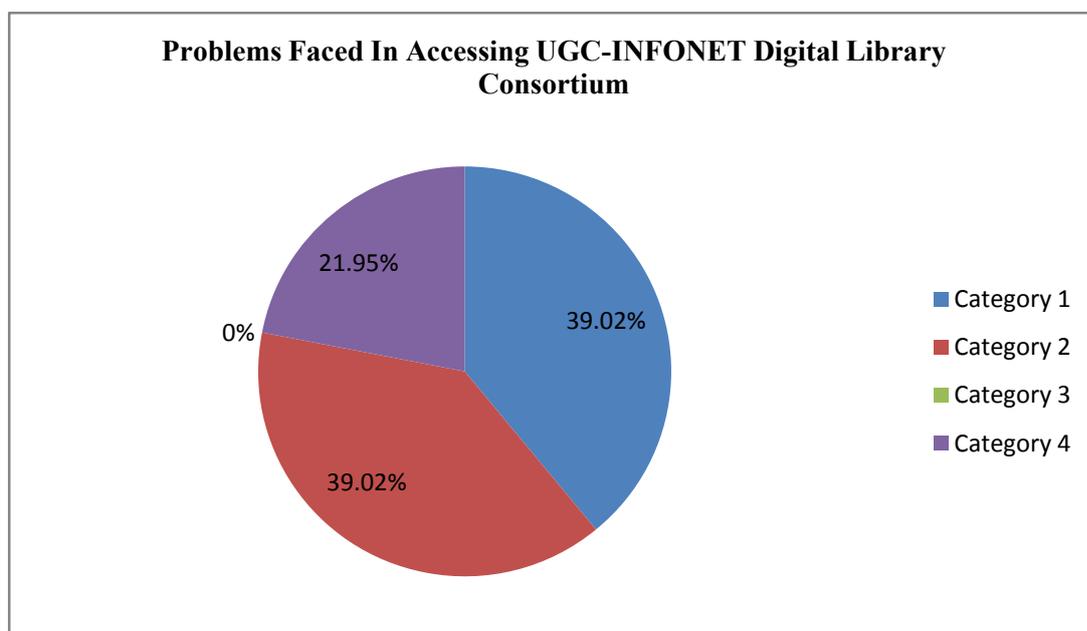
by 21 (25.60%) number of faculty and research scholars. Next to JSTOR are Springer Link 18(21.95%) and Oxford University Press 17(20.73%). Blackwell is the least preferred E-Journal which constitutes only 4.87 %.

5.2.6 Problems in Accessing UGC-INFONET Digital Library Consortium

The use of UGC-INFONET Digital Library Consortium is completely web based users need High Speed Internet Connectivity to access and download articles from the consortium. The Internet speed and access in the North East Region in general and Mizoram in Particular are comparatively much slower speed than other cities of the country. This is primarily because of the low bandwidth being used by BSNL, which is the soul Internet Service Provider in the state. The table stated below describes the reason in facing problems in accessing UGC-INFONET Digital Library Consortium.

Table 6: Problems Faced In Accessing UGC-INFONET Digital Library Consortium

Problems Faced In Accessing UGC-INFONET DLC	Number	Percentage
Poor Internet Connectivity	32	39.02%
Do Not Know Internet Access	0	0%
Downloading Articles from the Consortium	32	39.02%
Any Other Technical Problems	18	21.95%
TOTAL	82	



Category 1: Poor Internet Connectivity

Category 2: Downloading Articles from the Consortium

Category 3: Do Not Know Internet Access

Category 4: Any Other Technical Problems

The reasons stated on the above table are Poor Internet Connectivity, Lack of Internet Literacy, Problems in Downloading Articles from the Consortium and many other technical

barriers. One of the major reasons stated by the respondents is the poor internet connectivity and speed in the state like Mizoram.

5.3 Findings

UGC-Infonet Digital Library Consortium is a boon to the academic and Research community. The faculty members and research scholars during the study opined that such a consortium has tremendous impact on Academic and Research Development. The findings received through feedback from the Faculty Members and Research Scholars of two schools of studies namely, School of Social Science (SOS) and School of Economics, Management and Information Science (SEMIS) are given below.

1. Faculty members and Research Scholars expressed their opinion that UGC-Infonet Digital Library Consortium has greatly enhanced their knowledge and provide latest information pertaining to their academic and research activities.
2. The Consortium has been most useful in acquiring factual and reliable literature, useful for teaching and research. UGC-Infonet Digital Library Consortium provides wide range of research material around the globe, which is useful for writing articles for seminars, conference and research proposals.
3. UGC-Infonet Digital Library Consortium is one of the important sources to access e-journals of International standard which broadens the outlook of research scholars. The full text journal articles can be easily accessed and downloaded covering all subjects. Faculty members and research scholars located at Mizoram, which is one of the remotest areas of the North East region, are equally thankful in getting up-to-date study material for their teaching and learning. Faculty members who are also research supervisors are able to access world class journals and the journals are very much useful for Literature review while guiding the Research Scholars.
4. UGC-Infonet Digital Library Consortium helps in improving teaching pedagogy in the field of research and teaching with enriched insight into topic of interest.

5. UGC-Infonet Digital Library Consortium provided faster mode of acquiring Journal articles and carries pragmatic value in research and development. This Consortium is considered as knowledge driven resources thereby providing access to Academic world.

5.9 Testing of Hypothesis

The tentative assumptions presumed by the scholar before the Research problem is undertaken were verified and the following conclusion is drawn out of that.

1. The UGC-INFONET Digital Library Consortium, although popular in many Universities including Mizoram University, it was found that many of the Faculty members and Research Scholars are neither Information Literate in general and Internet in particular. Therefore, for the first time, the Department of Library and Information Science conducted UGC-INFONET Digital Library Consortium Awareness Programme on 15th-16th November 2010. This had a great impact on the Faculty members and Research Scholars to make use of Internet and access to Consortium.
2. The Faculty members and Research Scholars also opined that many technical problems such as Hardware and Software, working of the Internet in the campus, access and speed and retrieval of Full-Text articles from the Consortium. These are the regular problems faced by the respondents.
3. North East region in general and Mizoram in particular have the problem of High Speed Internet Connectivity because BSNL, the Internet service provider, uses Low Bandwidth, which affect the speed of Internet. Presently, the University is providing Internet facility with 10MB capacity and there is a possibility to increase the same to 1GB. Besides, the University has made the provision of providing Internet access 24/7 which will allow the Academic fraternity for effective and efficient use of UGC-INFONET Digital Library Consortium.

CHAPTER 6

Suggestions And Conclusion

6.1 Suggestions

The Faculty members and research scholars pertaining to two schools of studies stated earlier provided some suggestions and remedial measures for optimal use of UGC-INFONET Digital Library Consortium.

1. The faculty members and research scholars wanted to have internet access round o clock. Since there are limited computers and internet access point for the research scholars in their respective department, the research scholar suggested more computers to be procured by the MZU Computer Centre for accessing internet.
2. UGC-Infonet Digital Library Consortium should subscribe more numbers of journals and there are some journals in which open access to the full text articles is necessary.
3. Faculty members and research scholars in management used more journals since the Centre library procures very limited hard copies of Management journals.
4. It has been observed by the users of UGC-Infonet Digital Library Consortium that, access in UGC Infonet web pages are much slower than other web pages. Uses further suggested that Wi-Fi Internet connectivity should be provided in the campus to encourage faculty members and research scholars beyond office hours and holidays.
5. The uses further suggested that Standard Indian Journals may be added in the Consortium.
6. INFLIBNET at regular interval should organise UGC-Infonet Digital Library Consortium programme so as to maximise the usage of consortium journals.

6.2 Conclusion

The researcher after undertaking this study would like to conclude that UGC-Infonet Digital Library Consortium has gained popularity among the faculty members and research scholars of MZU in terms of its access and use both for Academic and Research development. The major problem lies with internet connectivity and access in the North East Region in general and Mizoram in particular. The use of this consortium can be increased to maximise extend in which

- a) Close co-ordination among the users from Computer Centre and Central Library
- b) High Speed connectivity and access (24X7)
- c) Uses awareness and Information Literacy Programme to be conducted at regular intervals both by INFLIBNET and MZU

The School of Social Science (SOS) and School of Economics, Management and Information Science (SEMIS) provides the highest number of faculty members and Research scholars in Mizoram University, therefore, an easy, reliable and effective access to UGC-Infonet Digital Library Consortium can widen their perspective and expanding their knowledge horizon in the field of social Science, Economics, Management, Library and Information Science teaching and research. It is therefore necessary that INFLIBNET UGC and Ministry of Human Resource Development (Govt. Of India) should provide all necessary infrastructure and facilities to the Universities located in the remote areas of the country. The Academic and Research Development are possible only when physical, Information and Communication Technology (ICT) and learning resources are in place which can enable optimum use of UGC-Infonet Digital Library Consortium.

Appendix II

Title of the M.Phil Dissertation

“Impact of the UGC-INFONET Digital Library Consortium on Social Science and SEMIS Faculty Members and Research Scholars of Mizoram University”

Name of the Scholar: **Ms. Saisingpuii. DLIS, MZU**

“UGC INFONET Digital Library Consortium provides access to 7000 peer review electronic journals to the universities under UGC of which MZU is one of them. The users of the University (students, teachers and Research Scholars) can make use of full-text articles available in these journals of their Academic and Research development. These e-journals cover almost all subject disciplines including Arts, Humanities, Social Science, Physical Science, Life Science, Computer Science, Management, Mathematics and Statistics”.

Questionnaire

1. Name of the Faculty member/Research Scholar : _____
2. Name of the School : _____
3. Name of the Department : _____
4. Are you aware of UGC-INFONET Digital Library Consortium : YES/NO
5. How frequently you access and make use of this Consortium :
a) Once in a Week
b) Once in a month
c) Very rarely
d) Not at all
6. Please state/name few journals that you access through this Consortium :
a) _____
b) _____
c) _____
d) _____
7. How do you rate the quality of the journals for your Academic and Research purpose :
a) Very Useful
b) Useful
c) Not up to the mark
d) Cannot say
8. Are you a computer literate? :
a) Very well
b) To some extent
c) Not at all
9. Are you an internet literate? :
a) Very well
b) To some extent
c) Not at all

10. Do you have any problem in accessing e-resources through Consortium? : a) Poor Internet connectivity
b) Do not know internet access
c) Downloading articles from the Consortium
d) Any other

11. For what purpose you make use of e-journals? : a) For classroom teaching
b) For Research work
c) Writing articles for research journals
d) Writing articles for Seminars and Conferences

12. Have you attend User Awareness Programme on UGC-INFONET Digital Library Consortium organized by DLIS, MZU : YES NO

13. Do you suggest the MZU Computer Centre should provide round o'clock internet access so as to make use of this consortium : YES NO

14. Please state briefly the impact of the UGC-INFONET Digital Library Consortium on your Academic and Research development:

15. Please suggest some remedial measures for optimum use of UGC-INFONET Digital Library Consortium:

Date:

Signature

Bibliography

Bibliography

Agarwal, A, Singh, P.K and Singh, D.K. Free electronic journals in the field of agriculture Science and its impact on agriculture libraries, Proceedings of the International Convention CALIBER 2008, University of Allahabad, February 28 & 29 and March 1st, 2008.

Agboola, Idayat Odunola. Use of Print and Electronic resources by Agricultural Science Students in Nigerian University. Library and Information Science Research. Vol. no. 32, Issue no. 1,2010. Pages 62-65.

Aharony, Noa. Web 2.0 in the professional LIS literature: An exploratory analysis. Journal of Librarianship and Information Science. Vol. no. 43, Issue no. 1. Pages 3-13.

Akasawa, M. and Ueda, S. On the Use of Electronic Media by Academic Economists. Library and Information Science. Vol. no.40, 1998. Pages 1-27.

Bar-Ilan, J, Peritz, B.C and Wolman, Y. A Survey on the use of Electronic Databases and Electronic Journals accessed through the web by the Academic Staff of Israeli Universities. Journal of Academic Librarianship. Vol. no. 29, Issue no. 6, 2003. Pages 346-361.

Bawden, D. After the Amazoogole: Web 2.0 and Information Research. Journal of Documentation. Vol. no. 61, Issue no. 4, 2007. Pages 461- 462.

Biradar, B.S and Sampathkumar, B.T. Use of internet by physicists in Universities of Karnataka state: A Comparative Study. ILA Bulletin. Vol. no. 41, Issue no. 4, 2005. Pages 25-40.

Borse, T R, Digital Information Resources Management. Journal of IASLIC Bulletin. Vol. No. 51, Issue No. 2, 2006. Pages 48-54.

Boyce P, Carol M, Tenopir C and King DW. How electronic journals are changing patterns of use. The Serials Librarian. Vol. no. 46, Issue no. 1 & 2, 2004. Pages 121-141.

Bhatt, J and Joshi, N. Impact of UGC-INFONET Digital Library Consortium to Academic Community: A Case Study of the Maharaja Sayajiro University of Baroda. Proceedings of the 7th International CALIBER – 2009. (Pondicherry University, Puducherry. February 25-27, 2009).

Carmode, G and Krishnamurthy, B. Key differences between Web 1.0 and Web 2.0. Vol. no. 13, Issue no. 6, 2008.

Chand, Prem. et al., “Usage of Electronic – Journals under UGC-INFONET E-Journal Consortium.

Chand. Prem, Devi Satyabati Th. & Chauhan, Suresh K. (2006). Assessment and Evolution of Usage of UGC INFONET E-Journal Consortium in North East Universities. 4th Convention: PLANNER -2006, (Mizoram University November 09-10). Pages 351-356.

Chauhan L, Agarwal S and Kumar S. Understanding and Creating RSS feed in the system. Library and Information Technology. Vol. No. 42, Serial No. 3, 2009. Pages 164-175.

Cholin, V.S, Thiyam, S and Murthy T, A.V. UGC-Infonet E-Journals Consortium: Access to scholarly journals and databases for Indian Academic Community – A Status. In TAV et. al (Eds). Dynamic Interoperable Web-based Information System, (Ahmedabad: INFLIBNET Centre) 2006. Pages 338-349.

Chua, Alton Y.K, Goh, Dion H. A study of Web 2.0 applications in library website. Library and Information Science Research. Vol. no. 32, Issue no. 3, July 2010. Pages 203-211.

Dhiman, Anil Kumar (2005), “Consortium based Library Subscription: Some Issues “. Ahmedabad; INFLIBNET.

Devi, Thiyam Satyabati and Murthy, T.A.V (2005), “Issues in UGC-INFONET E-Journals Consortium”. Ahmedabad; INFLIBNET.

Dhar, Megna, The Changing Role of Library Professionals in the Information Technology Era. Journal of IASLIC Bulletin. Vol. no. 55, Issue No. 5, 2010. Pages 119-125.

Dillon, I.F and Hahn, K.L. Are researchers ready for the electronic only journal collection? Results of a Survey at the University of Maryland. Portal: Libraries and the Academy. Vol.no.2 , 2002. Pages 379-390.

Deka, Prasanta Kumar and Singh, Sanjay Kumar (2007).Internet and Web Technology for Library in Digital Environment with reference to College Libraries of Guwahati, Ahmadabad: Information and Library Network Centre.

Eqbal, M. Use of Electronic Journals by the Research Scholars & Faculty of Science and Faculty of Engineering, AMU, Aligarh: A Comparative Study NACLIN, November 20-23, 2007.<http://www.nacline.org/nov22.html> (Accessed on February 2012).

Guruprasad, R and Nikam, Khaiser. Effect of reading e-journals on the research of aerospace Scientists and Engineers. Annals of Library and Information Studies. Vol. no. 57, 2010. Pages 373-379.

Hewitson A. Use and awareness of electronic information services by academic staff at Leeds Metropolitan University: A Qualitative Study. Journal of Librarianship and Information Science. Vol. no. 34, Issue no. 1, 2002. Pages 43-52.

INFLIBNET Centre. Guidelines for UGC-Infonet Digital Library Consortium. <http://www.inflibnet.ac.in/guidelineforugcinfonetdlc.pdf> (Accessed on 23rd March 2012)

Jana, Sibsanakar and Bhattacharya, Udayan, Towards Understanding Digital Object. Journal of IASLIC Bulletin. Vol. no. 54, Issue No. 3, 2009. Pages 147-156.

Joshi, Govind (2006). Digital Library Initiative in North East India with Special Reference to Tocklai Experimental Station, Ahmadabad, INFLIBNET Centre.

Joteen Singh, R K,"Status of library automation of Manipur university library under INFLIBNET: Proceedings of the Seminar Paper, PLANNER.2005. Shillong.

Joteen Singh, R.K, Devi Th. Madhuri and Raychaudhury, Arup. Use of internet based e-resources at Manipur University: A Survey. Annals of Library and Information Studies. Vol. no. 56, March 2009. Pages 52-57.

Kling, R and Mckim, G. Not just a matter of time: Field differences and the shaping of electronic media in supporting scientific communication. Journal of the American Society for Information Science. Vol. no. 51, Issue no. 14, 2010. Pages 1306-1320.

Kumbar, M. Use of E-resources by Research Scholars in CFTRI, Mysore: A Study. ILA Bulletin. Vol. no. 41, Issue No. 3, 2005. Pages 16-20.

Kumbar M, Kumar NG, Raj NV and Parveen JK. Use of electronic resources by researchers. ILA Bulletin. Vol. no. 41, Issue no. 3, 2005. Pages 16-20.

Kumbar B.D and Hadagali, G.S. Use of UGC-Infonet E-Journals Consortium by faculty members and research scholars of Karnataka University, Dharwad. SREL Journal of Information Management. Vol. no. 46, Issue no. 1, 2009. Pages 51-60.

Kumbar, B.D, Vantal, R.M, Hadagali, G.S and Patil, L. Use of UGC-Infonet Consortium by the faculty members and research scholars. Department of Chemistry, Karnataka University, Dharwad, Proceedings of the International Convention CALIBER 2006, Gulbarga University, Gulbarga, February 2nd-4th, 2006. Pages 257-264.

Kaur, B. and Verma, R. Use of E-resources at TIET Library, Patiala: A Case Study. ILA Bulletin. Vol. No. 42, Issue No. 3, 2006. Pages 18-20.

Khaisir, N and Pramodini, B. Use of E-journals and Databases by the Academic community of University of Mysore: A Survey. Annals of Library and Information Studies. Vol. No. 52, Issue No. 4, 2007. Pages 19-22.

Laltlanmawii, Rosa (2011). An Evaluation of use of E- Resources in Indian Institution of Technology Library, Gawahati. A Dissertation of M.Phil degree (Mizoram University). (Unpublished).

Mukherjee, Bhaskar and Kumar, Prashant, Use of UGC-INFONET E-Journals by Research Scholars of the Banaras Hindu University, Varanasi: A Case Study. Annals of Library Information Studies. Vol. No. 57, Issue No. 4, 2010. Pages 339-347.

Madhusudhan, Margam (2008), Use of UGC–INFONET E-Journals by Research Scholars and Students of the University of Delhi, Delhi: A Study. Library Hi-Tech. 26. 3, 2008. Pages 369-386. (Available at www.emeraldinsight.com/0737-8831.htm) (Accessed on 2.2.2012)

Moghaddam, G and Talawar. The Use of Scholarly Journals at then Indian Institute of Science: A Case Study in India. Interleading & Document Supply. Vol. No. 36, Issue No. 1, 2008. Pages 15-29.

Madalli, Devika P and Manju, Online Digital Asset Creation: Technology and Standards. Journal of IASLIC Bulletin. Vol. No. 52, Issue No. 2, 2007. Pages 105-114.

Naushad Ali, P.M. and Hasan, E. The use of electronic services IIT Library Delhi: A Study of users opinion. IASLIC Bulletin. Vol. no. 48, Issue no. 2, 2003. Pages 71-82.

Noa, Aharony. The Influence of LIS Student's Personality Characteristics on their perceptions towards Web 2.0 use. Journals of Librarianship and Information Science. Vol. No. 41, Issue No. 4, 2009. Pages 227-235.

Patil, D.B and Parameshwara, S. Use of electronic resources by faculty members and research scholars in Gulbarga University, Gulbarga: A Survey. SREL Journal of Information Management. Vol. no. 46, Issue no. 1, 2009. Pages 51-60.

Pradhan, Debasish and Tripathi, Tridid, Digital Library, Virtual Library and Other Emergency Library Systems: And /interpretation to their Terminological Situations in Indexing Language and Reference Tools. Journal of IASLIC Bulletin. Vol. no. 54, Issue No. 3, 2009. Pages 157-164.

Raza, N and Upadhyay, A.K. Usage of e-journals by researchers in Aligarh Muslim University: A Study. The International Information and Library Review. Vol. no.38, 2006. Pages 170-179.

Rogers, S. Electronic Journal Usage at Ohio State University. College and Research Libraries. Vol. no. 62, 2001. Pages 25-34.

Saravanan, P and Mary, A Lawrence, Teachers Approach to Internet and Online Information Resources. Journal of IASLIC Bulletin. Vol. no.-53, Issue No. 3, 2007. Pages 150- 158.

Sinha, Manoj Kumar et al. (2007). Application of Information Communication Technology (ICT) in College Libraries of Barak Valley (Southern Assam), Ahmadabad; Information and Library Network Centre.

Sreekumar, M.G (2005), 'Digital Archival Strategies for Library Consortia: the IIM Consortium Experience'. New Delhi;Excel Book.

Singh, R.K Joteen (2010), 'Information and Library Network Programme in the 21st century'. New Delhi; B R Publishing.

Singh PK, Nazim and Singh SN. Awareness and use of online journals by the faculty members, researchers and students in the faculty of natural sciences, Jamia Millia Islamic University: A Survey. In Jagdish Arora et. al (Eds). From Autonomous to Transformation (Ahmedabad: INFLIBNET Centre) 2008. Pages 541-550.

Tariang, Bibika Laloo and Lahkar, N. Evaluation of websites used by Social Scientists of North East India. Journal of IASLIC Bulletin. Vol. no. 55, Issue No. 1 2010. Pages 43-50.

Tenopir, C and King, D.W. Towards Electronic Journals: Realities for Scientists, librarians and publishers. Special Library Association, 2000. Pages 488.

Tenopir, C and King D.W. Electronic journals: How user behavior is changing, online information. Proceedings of the International Online Information. Meeting, London, December, 2001. Oxford: Learned Information Ltd. Pages 175-181.

Tedd, Lucy A (2005), 'Some Practical Issue in the Management of Digital Libraries'. New Delhi; Excel Book.

Upadhyay, N and Chakraborty, H.K. Online journals and databases: A Study of use and awareness among academic at Main Library, IT, B.H.U, Proceedings of the International Convention CALIBER 2008, University of Allahabad, February 28 & 29 and March 1st, 2008.

Veenapan S, Singh Khomdom and Devi R. Use of e-resources and UGC-Infonet Consortium by the teachers and research scholars in Manipur University. In Jagdish Arora et. al (Eds). From Autonomous to Transformation (Ahmedabad: INFLIBNET Centre) 2008. Pages 541-550.

Vishala, B.K and Bhandi, M.K. Availability of Library and Information Science Electronic Journals through UGC-INFONET Project. Annals of Library and Information Studies. Vol. no. 53, Issue No. 1 2006. Pages 65-69.

Walmika, R.H et al., Awareness and use of UGC-INFONET Digital Library Consortium by the Faculty members of Karnataka State Universities. Journal of Annals of Library and Information Studies. Vol. no. 57, Issue No.1, 2010. Pages 33-43.

Weingart, S.J and Anderson, J.A. When questions are answers: Using a survey to achieve faculty awareness of the Library's Electronic Resources. College and Research Libraries. Vol. no. 61, 2000. Pages 127-134.

Zhang, Y. The impact of Internet based electronic resources on formal scholarly communication in the area of library and information. Journal of Information Science. Vol. no. 24, Issue no. 4, 1998. Pages 241-25