ABSTRACT

Introduction

The roots of evolution of Internet are at ARPANET, developed by the American defence department to facilitate information/file transfer through a computer network. Thus, starting as a Local Area Network (LAN) now it has become a global network known as Internet. The most important aspect to be noted with regard to ARPANET is that in its initial stages itself some of the universities were linked to the network. This shows that Higher Educational Institutions (HEIs) are the primary participants in the development of the Internet right from its inception.

There are lot of developments in Information and Communication Technologies (ICTs) that have their influence on publication of primary, secondary and tertiary documents and communication of the same. Today, the Internet facilitates availability of the primary, secondary and tertiary documents online. Academic libraries in the West and advanced countries are already adopting the Internet to extend their services.

In fact, India, being well known as one of the IT hubs in the world, is popular for its contribution in software development world over. Such a country should be a pioneer in the use of Internet in all walks of life and its HEIs should be top users of Internet. An overview of the developments in India, as far as, use of latest technologies in general and Internet in particular, is concerned there are considerable developments. The University Grants Commission (UGC) has come a long way to develop a network of all university and college libraries in the country. The emergence of Information and Library Network (INFLIBNET) is the result of UGC’s efforts towards developing the network at national level.

Therefore, there arises the need to know whether the libraries of Higher Education Institutions (HEIs) extending Internet-based Library and Information Services (IBLISs).
Significance of the Study

The higher education system of India is one of the biggest in the world. The HEIs include Central Universities, State Universities, Private Universities, Deemed Universities, Institutions of National Importance and colleges. According to the Ministry of Human Resources Development (MHRD) there are a total number 506 universities/institutions that include 42 Central universities, 243 State universities, 53 State Private universities, 130 Deemed universities, 33 Institutions of National Importance (IITs and IIMs) and five Institutions (established under various State legislations) by 2009. The number of colleges is above 30,000 in 2011. As majority of them are government funded there is a lot of public money being invested into these higher learning institutions.

The government spending is justified only if the libraries of HEIs utilize the grants properly for extension of the latest services by using the Internet. As it is vital to know the state-of-the art services being rendered against the government spending, an investigation into these aspects would prove to be very important to justify the expenditure. Therefore, the proposed study is very significant.

In view of the above a study on the state-of-the art of IBLISs extended by the central libraries of HEIs proves to be very much significant. This study will justify the money spent on developing infrastructure and extending these services. It will also endeavour to find out the problems involved in extension of IBLISs so that necessary solutions can be conceived. Therefore, it is a very significant study.

Need for the study

The literature review presented in Chapter 3 shows that there are similar studies carried out in other countries like United States of America (USA), United Kingdom (UK), Australia, and even in Africa. In India also there are studies in the related fields but there is no national level study so far. Therefore, there is a need to conduct a study to find out the current scenario of IBLISs rendered in central libraries of HEIs in India. Thus, there is a gap in the field. Therefore, there is a
need to fill the gap by conducting a study. Hence, the present study proceeds with the following statement of the problem.

**Statement of the Problem**

The statement of the problem for the study is ‘Internet-based Library and Information Services in Higher Education Institutions in India – A Study’.

The above statement of the problem is elucidated with the following operational definitions of the major concepts in the statement.

**Operational Definitions**

**Internet-based Library and Information Services** – Library and Information services being extended using the Internet. Library services, namely circulation services, catalogue services, periodicals routing, document delivery services, etc., and information services such as reference services, referral services, and alert services like current awareness services, selective dissemination of information, etc. In other words all the library and information related services provided through the Internet.

**Higher Education Institutions** – HEIs include all the universities, institutions of national importance and colleges. But in the context of this study the HEIs mean the universities, deemed to be universities, and institutions of national importance, i.e., IITs and IIMs. By Internet-based Library and Information Services of Higher Education Institutions in India means all the library and information services rendered by the libraries of higher education institutions in India. Further, the libraries of HEIs under this study stand for central/main libraries of the HEIs that are located on the main campus of the institutions but not the college or the departmental or seminar libraries in the universities.
Chapterisation

The research report/thesis is organized into six chapters and the chapterisation is as follows:

**Chapter 1 – Introduction:** This chapter presents the background and significance of the study, and the need for the study, statement of the problem, operational definitions and chapterisation.

**Chapter 2 – Objectives, Hypotheses, Scope and Methodology:** This chapter presents the objectives, hypotheses, scope and the methodology used to carry out the study.

**Chapter 3 – Review of Literature:** This chapter furnishes the review of related literature in chronological order.

**Chapter 4 – Higher Education in India:** This chapter gives an account of higher education scenario in India starting from the early period to the present.

**Chapter 5 – Data Analysis:** This chapter presents the analysis of the data collected for the study.

**Chapter 6 – Findings and Conclusions:** This chapter presents major and specific findings of the study and it also offers suggestions based on the findings and concludes with conclusions.

**Objectives of the Study**

The primary objective of the study is to find out the state-of-the-art of IBLISs being rendered by the central libraries of HEIs in India. In pursuance of the above objective the study attempts to:

1. Find out whether the central libraries of HEIs in India are extending the IBLISs.

2. Find out the different IBLISs being extended by the central libraries of HEIs in India.
3. Find out availability of the required infrastructure in the central libraries of HEIs in India required for rendering the IBLISs.

4. Find out availability of the human resources in the central libraries of HEIs in India required for rendering the IBLISs.

5. Find out availability of the management support to the central libraries of HEIs in India to extend the IBLISs.

6. Find out the usage of various IBLISs by different user communities in the central libraries of HEIs in India.

7. Find out the problems being faced by the central libraries of HEIs in India in rendering the IBLISs?

8. Suggest a plan for further improving the IBLISs in central libraries of HEIs in India.

**Hypotheses**

The HEI libraries are extending IBLISs in most of the developed and developing countries. Indian HEI libraries should be the forerunners in extending the IBLISs; it is because of the support extended by the UGC through INFLIBNET and also the administration of individual HEIs. In spite of all this the scene is not that encouraging. There are cases where the libraries of HEIs may not have full management support and there are also several cases where the library automation is in its inception. Further, the pace of development in the libraries of HEIs is considerably slow in terms of library automation, developing networks, acquisition of e-resources and designing and deployment of IBLISs. With this premise the following hypotheses are formulated for empirical test by the study.

1. Majority of the central libraries of HEIs in India are not extending IBLISs.

2. Majority of the central libraries of HEIs in India do not have the required infrastructure to extend the IBLISs.

3. Majority of the central libraries of HEIs in India do not have the required human resources.

4. Majority of the central libraries of HEIs in India do not have their management support in providing the IBLISs.
5. There is low rate of usage of the IBLISs in central libraries of HEIs in India.

6. Majority of the central libraries of HEIs in India are facing problems in extension of IBLISs.

Besides the above hypotheses the study also attempts to test various factors in the extension of IBLISs, as a matter of fact, without required infrastructure, human resources, etc. it will not be possible to extend IBLISs. In other words it means availability of infrastructure, human resources, etc., will have its impact on extension of IBLISs. However, as it is said, “where there is a will there a way”, the present developments in India would enable the social institutions in functioning efficiently without having required resources for example there is no need for a HEI library to have web server to extend IBLISs as there are outside web hosts who will facilitate extension of IBLISs. Similarly, without availability of required human resources the organisation can go ahead with their activities by out sourcing their operations. With this premise the following null hypotheses are formulated.

7. Extension of IBLISs is independent of year of establishment of the library.

8. Extension of IBLISs is independent of possession of web servers.

9. Extension of IBLISs is independent of availability of computers to the staff.

10. Extension of IBLISs is independent of possession of digitisation scanners.

11. Extension of IBLISs is not dependent on possession of digitisation software.

12. Extension of IBLISs is independent of possession digital library software.

13. Extension of IBLISs is independent of possession of Web design software.

14. Extension of IBLISs is independent of availability of library professionals.

15. Extension of IBLISs is not dependent on availability of software professionals.

16. Extension of IBLISs is independent of availability of hardware professionals.

17. Extension of IBLISs is independent of management support.
Scope and Limitations of the Study

Academic institutions have varied forms and structures of library systems. Each university library system will have a central/main library, besides, at the level of constituent colleges there may be libraries attached each constituent college and each constituent college may also have seminar libraries attached to various departments in the college. All these libraries together form the library system of HEIs that provide different services. However, when the study deals with HEI library services it will be essential that the study deals with all these libraries. But, a study at national level will not be in a position to deal with services of all the above listed libraries. Therefore, this study confines itself to the IBLISs provided by central libraries of HEIs in India. Similarly, all these libraries provide different services. But, this study confines to IBLISs provided by the central libraries of HEIs in India.

Methodology

The method of research used to conduct the study was survey method. It is a sample survey of the central libraries of HEIs in India. Further, it is an exploratory survey that explored the state-of-the-art of the extension and use of IBLISs in the central libraries of the HEIs.

The Universe

According to the Ministry of Human Resources Development (MHRD) the total number of HEIs, up to 2009, is 506 that include 42 central universities, 243 state universities, 53 state private universities, 130 deemed universities, 33 institutions of national importance (IITs and IIMs) and five other institutions established under various state legislations. The number of colleges is over 30,000 up to 2011. However, the present study is concerned with only universities and national institutions of importance, the number of which is 506.
Sampling Technique Used

The universe of HEIs of this study is spreads all over India. As stated in the scope of the study the census study was unwieldy, hence a sample study is taken up. Thus, it is a sample study of the central libraries of HEIs in India. From the universe defined above a sample of select central libraries of the HEIs in India was chosen based on simple random sampling technique. Lottery method was used to select the elements from the HEIs taking MHRD listing as the sampling frame.

The Sample

Out of 506 HEIs a 20% sample of HEIs was selected using the above mentioned sampling technique, i.e., simple random sample. Thus, 100 central/main libraries in the HEIs in India were selected. Random sample was selected using lottery method. Based on the sampling frame, developed from the list downloaded from the MHRD website, 506 chits were prepared and a sample of 100 central/main libraries in the HEIs was selected by picking up chits from the lot.

Data Collection Method

A semi-structured questionnaire was developed to collect the required data about the IBLIs from the chief librarians of the central/main libraries of the HEIs in India. The questionnaire contained questions pertaining to different aspects of IBLISs, grouping them into general information about the library, infrastructure, human resources, management support, different IBLISs, usage of IBLISs and problems faced by the libraries in extending the IBLIS.

Pilot Study

A pilot study was conducted to test the usefulness of the questionnaire in collecting the required data. The preliminary questionnaire was served to 20 librarians out of whom only 12 have responded. Based on their response, the
preliminary questionnaire was redesigned and the final questionnaire was developed.

**Data Analysis**

Data analysis was done by applying statistical tools such as measure of central tendency, i.e., arithmetic mean and Pearson’s Chi-square test to test the hypotheses. Statistical Package for Social Sciences (SPSS), version 16, was used for processing the data and obtaining the measures. The data presentation methods used are both tabular and diagrammatic methods.

**Findings**

**Availability of Digital Collections**

Development of digital collections is in its initial stages in the responding libraries in India. However, 19.40% of libraries have more than 5000 online collection and about 54.09% of the HEI libraries have both the online and off line resources.

**Availability of Print Collection**

All responding libraries of HEIs possess both digital and print collection of documents. Thus, they can be designated as hybrid libraries. The HEI libraries in India have very rich print collection, as 49.25% responding libraries have print collection ranging from 50,000 to more than 3 Lakhs.

**Availability of Hardware**

Majority (above 90%) of the responding Central Libraries of HEIs possess all the required hardware except ‘digital scanners’, which is in a little over 63.01% of libraries, in fact it is actually nearer to majority.

**Availability of Software**
Majority (92.11%) of the responding Central Libraries of HEIs have automation software. Data in respect of other software indicates that ‘digitisation software’ is available in 63.24%, ‘digital library software’ in 40% libraries and ‘web design software’ in 34.82% libraries.

**Availability of Human Resources**

Majority of the responding libraries have ‘qualified library professionals’ (in 96.05% responding libraries) and ‘administrative / support staff’, (in 82.67% responding libraries). In other categories it is less, i.e., ‘software professionals’ (38.89%) and ‘hardware professionals’ (29.17%).

**Support of the Management in Extension of IBLISs**

Management support appears to be good enough in all aspects listed as majority of responding Central Libraries of HEIs; around 83% and above libraries have management support. The only area where management support is lagging is ‘recruitment of computer staff’ in case of 35.14% of responding libraries.

**Extension of IBLISs in the Libraries**

Majority of the responding libraries (72.73%) are providing the IBLISs. In the remaining libraries, i.e., in 12.99% libraries the IBLISs are under planning and 14.29% libraries are not all providing the IBLISs.

**Own Hosting of the Website**

It is remarkable to note that 100% of the responding Central Libraries of HEIs (i.e. 56 out of 56) are extending the IBLISs from their own websites, i.e., the websites are hosted by themselves without depending on outsourcing .

**Period of Extension of IBLISs**

Among the three categories of period of extension of IBLISs 39.29% of responding libraries are rendering the IBLISs between > 5 years ≤10 years’
followed by 33.93% libraries ‘>10 years’ and the least being ‘≤ 5 years’ by 26.79% libraries.

**Type of Access to the IBLISs**

While 51.79% of the responding Central Libraries of HEIs extend open access system to their IBLISs and 48.21% libraries have closed access.

**Type of Authentication to Access to the IBLISs**

Among the three authentication categories the highest of responding libraries (37.50%) are extending their IBLISs through ‘IP Based’, 32.14% through ‘user ID & Password’ and 30.36% libraries are doing so through ‘both IP based & user ID-PW’.

**Number of Daily Visitors to the Library Website for the IBLISs**

Majority (64.29%) of the responding libraries indicated ‘daily visitors’ ‘<500’ to their IBLISs, followed by 21.43% libraries ‘>1500’ and the least percent (14.29%) of libraries have daily visitors in the range of ‘>500 - ≤1500’.

**Year-by-Year Increase in the number of Users for the IBLISs**

While 51.85% responding libraries have confirmed that there is ‘year-by-year increase in the number of users for the IBLISs’, 48.15% libraries said ‘no’.

**Availability of General Information Services**

Almost all of the responding libraries that are extending IBLISs are providing one or more ‘general information services’. The highest percent of libraries i.e., 92.73% of responding libraries are providing ‘particulars of library services’.

**Availability of Catalogue Related IBLISs of In-house Resources**

Over 85% of the responding libraries are providing ‘access to catalogue of in-house resources’ and ‘document availability status’ followed by ‘bibliographic
data in MARC format’ by 68.52% libraries. However, an encouraging percentage of 53.85% of the libraries are providing ‘access to full text documents’ also.

**Availability of Catalogue Related IBLISs of Outside Resources**

The highest percentage (56%) of the responding libraries are providing ‘access to union catalogue(s)’ followed by ‘access to catalogues of other academic libraries’ by 44.90% libraries, ‘access to catalogues of publishers’ by 31.25% libraries, ‘access to catalogues of public libraries’ by 26.53% libraries, ‘access to WorldCat’ by 26.53% libraries, and the least being ‘access to catalogues of national libraries’ by 24.49% libraries.

**Availability of Circulation Related IBLISs**

Majority of the responding Central Libraries of HEIs are providing most of the listed circulation related services through their IBLISs. Among the highest is ‘user account status’ by 84.91% libraries and ‘circulation policies’ is by 63.46% and the percentage of responding libraries relating to all the other circulation related services range between 63.46% and 84.91%. The least number of responding libraries 21.15% are providing ‘online payment of overdue’ and ‘overdue intimation’.

**Availability of Acquisition Related IBLISs**

Of the three ‘acquisition related IBLISs’ 59.62% of the responding libraries are extending ‘submission of recommendations for acquisition of documents’ feature, 57.69% libraries are providing ‘status of documents of recommendations submitted’ and 52.83% libraries are providing ‘information about acquisition policies’.

**Availability of Reference Service Related IBLISs**

Majority of the responding libraries are not providing most of the listed ‘Reference Service Related IBLISs’. Only three services ‘encyclopaedias’, ‘dictionaries’ and ‘ask a librarian’ are being provided by 65.31%, 64.71% and
64.58% of libraries respectively. Among remaining services ‘indexes’ finds the highest place by 62% libraries and the last being ‘institutional repositories’ by 41.18% libraries.

**Availability of Research Support Related IBLISs**

Of the 15 listed ‘Research Support Related IBLISs’ seven services are being rendered by majority of the responding Central Libraries of HEIs. Out of these, the highest percentage (94.55) libraries are providing ‘access to e-journals subscribed’ and the least (65.38%) of the libraries extending ‘open j-gate’ service.

**Availability of Web 2.0 Based IBLISs**

Of all the dozen listed ‘Web 2.0 Based IBLISs’ none of the services is rendered by majority of the responding Central Libraries of HEIs. The highest percentage of the responding libraries extending ‘e-learning’ is the highest with 41.18% and the least percentage of the libraries extending is ‘folksonomy’ with 8.33%.

**Usage of IBLISs by Different User Communities**

As far as ‘very high’ usage of IBISs is concerned, 41.51% responding libraries indicated it is ‘research scholars’ at the top followed by ‘faculty members’ (26.42%), ‘PG students’ (25%), ‘UG students’ (24.44%), ‘institutional members’ (10.64%) and ‘other staff’ (10%).

As far as ‘very high’ usage of IBLISs, being provided by the responding libraries, is concerned it is the ‘research scholars’ with 41.51% at the highest place and at the least is ‘other staff’ with 10%. Other user communities with ‘very high’ usage are ‘faculty members’ 26.42%, ‘PG students’ 25%, ‘UG students’ 24.44% and ‘institutional members’ 10%.

Further, ‘very high’ and ‘high’ usage put together also the ‘research scholars’ figure with highest percentage.
Usage Level of Different IBLISs

‘WebPAC’ has ‘very high’ usage with 56.25% of the responding libraries among all other IBLISs and the least is ‘acquisition related’ IBLIS with 30.95%.

Severity of Problems Being Faced in Extension of IBLISs

It is found out that none of the responding libraries have severe problems in extending IBLISs as even very low severity, under each of the listed problems, is denoted by very negligible percentage of the libraries. The most severe problem, ‘lack of hardware professionals’ that is being faced is denoted by only 10.14% responding libraries under ‘very high’ category.

Realisation of the Objectives of the Study

Objective 1: To find out whether the Central Libraries of HEIs in India are extending the IBLISs.

✓ The above objective has been realised, and it is found that majority (72.73%) of the Central Libraries of HEIs in India are providing IBLISs. Further, it is also found that 12.99% libraries are ‘under planning’.

Objective 2: To find out different IBLISs being extended by the Central Libraries of HEIs in India.

✓ The above objective is realised. It is found out that majority of the libraries are extending different types of IBLISs excepting the services that are based on Web 2.0 technologies. These services are rendered by a negligible minority of the libraries.

Objective 3: To find out availability of the required infrastructure of hardware and software in the Central Libraries of HEIs in India required for rendering the IBLISs.

✓ The study realised the above object and it is found that almost all the libraries have the required infrastructure to provide the IBLISs except ‘digital library software’ and ‘web design software’.
Objective 4: To find out availability of human resources in the Central Libraries of HEIs in India required for rendering the IBLISs.

✓ The study realised the above objective as it is found that almost all libraries have the required human resources to provide the IBLISs. However, hardware and software professionals are available in less than half of the libraries only.

Objective 5: To find out availability of management support to the Central Libraries of HEIs in India to extend the IBLISs.

✓ The above objective is realised and it is found out that almost all the libraries have the support of their management for extension of the IBLISs.

Objective 6: To find out usage of the IBLISs by different user communities and different IBLISs in the Central Libraries of HEIs in India.

✓ The study realised the above objective and it is found out that research scholars followed by faculty members and PG students record ‘high’ to ‘very high’ rate of use of IBLISs.

Objective 7: To find out what are the problems being faced by the Central Libraries of HEIs in India in rendering the IBLISs?

✓ The study realised the above objective. It is found out that the Central Libraries of HEIs in India are not facing any major problems in extending the IBLISs. This is also validated by findings under objectives 3, 4 and 5, which denote that the libraries have required infrastructure, human resources and management support.

Results of Verification of the Hypotheses

Hypothesis 1: The Central Libraries of HEIs in India are not extending IBLISs.

✓ The above hypothesis is disproved as majority (72.73%) of Central Libraries of HEIs in India are extending the IBLISs. (Table 5.2.1). It is further found out that the libraries are also extending different types of IBLISs.
Hypothesis 2: The Central Libraries of HEIs in India do not have the required hardware and software to extend the IBLISs.

- This hypothesis is disproved as majority of Central Libraries have the required infrastructure.

Hypothesis 3: The Central Libraries of HEIs in India do not have the required human resources.

- This hypothesis is disproved as almost all the libraries have the required professional staff with knowledge of hardware and software who can also manage IBLISs. This is the reason the libraries indicate that lack of human resources such as hardware and software professionals is not a problem in extending the IBLISs.

Hypothesis 4: The Central Libraries of HEIs in India do not have their management support in providing the IBLISs.

- The hypothesis is disproved as the majority (84.24%) Central Libraries of HEIs have management support for the extension of IBLISs.

Hypothesis 5: There is no usage of the IBLISs in Central Libraries of HEIs in India.

- This hypothesis is disproved as there is ‘high’ to ‘very high’ rate of usage of IBLISs by various user groups and various IBLISs in the Central Libraries of HEIs.

Hypothesis 6: There are problems in extension of IBLISs by Central Libraries of HEIs in India.

- This hypothesis is disproved as majority of libraries do not have ‘very high’ severity of any problem.

Extension of IBLSs does not depend on factors such as ‘year of establishment’, ‘availability of web servers’, ‘availability of computers to staff’, ‘availability of digitisation scanners’, ‘availability of digitisation software’, ‘availability of digital library software’, availability of web design software’, ‘availability of library automation software’, ‘availability of software
professionals’, ‘availability of hardware professionals’ and ‘availability of management support’. This hypothesis is ramified / branched out into specific hypotheses. The result of verification of these hypotheses is presented below.

**Hypothesis 7: Extension of IBLISs is independent of year of establishment of the library.**

- This null hypothesis is disproved as there is significant relationship between ‘year of establishment’ and ‘extension of IBLISs.’ Therefore, it is found that year of establishment has impact on extension of IBLISs.

**Hypothesis 8: Extension of IBLISs is independent of possession of web servers.**

- This hypothesis is disproved as there is significant relation between possession of web servers and extension of IBLISs. Thus, it is found out that extension of IBLISs depends on possession of web servers.

**Hypothesis 9: Extension of IBLISs is independent of availability computers to the staff.**

- This hypothesis is disproved as there is significant relation between availability of computers to the staff and extension of IBLISs. Thus, it is found out that extension of IBLISs depends on availability of computers to the staff.

**Hypothesis 10: Extension of IBLISs is independent of possession of digitisation scanners.**

- This hypothesis is disproved as there is significant relation between possession of digital scanners and extension of IBLISs. Thus, it is found out that extension of IBLISs depends on possession of digital scanners.

**Hypothesis 11: Extension of IBLISs is not dependent on possession of digitisation software.**

- This hypothesis is disproved as there is significant relation between possession of digitisation software and extension of IBLISs. Thus, it is
found out that extension of IBLISs depends on possession of digitisation software.

**Hypothesis 12: Extension of IBLISs is independent of possession of digital library software.**

- This hypothesis is disproved as there is significant relation between possession of digital library software and extension of IBLISs. Thus, it is found out that extension of IBLISs depends on possession of digital library software.

**Hypothesis 13: Extension of IBLISs is independent of possession of Web design software.**

- This hypothesis is disproved as there is significant relation between possession of web design software and extension of IBLISs. Thus, it is found out that extension of IBLISs depends on possession web design software.

**Hypothesis 14: Extension of IBLISs is independent of availability of library professionals.**

- This hypothesis is disproved as there is significant relation between availability of library professionals and extension of IBLISs. Thus, it is found out that extension of IBLISs depends on availability of library professionals.

**Hypothesis 15: Extension of IBLISs is not dependent on availability of software professionals.**

- This hypothesis is disproved as there is significant relation between availability of software professionals and extension of IBLISs. Thus, it is found out that extension of IBLISs depends on availability of software professionals.

**Hypothesis 16: Extension of IBLISs is independent of availability of hardware professionals.**

- This hypothesis is disproved as there is significant relation between
availability of hardware professionals and extension of IBLISs. Thus, it is found out that extension of IBLISs depends on availability of hardware professionals.

**Hypothesis 17: Extension of IBLISs is independent of management support.**

- This hypothesis is disproved as there is significant relation between management support and extension of IBLISs. Thus, it is found out that extension of IBLISs depends on management support.

**Conclusions**

This particular study endeavoured to find the state-of-art of IBLISs being rendered by the central libraries of HEIs in India. The study also looked into various related aspects like development of digital collection, availability of software, hardware, human resources and management support, extent of rendering various IBLISs, usage of IBLISs by different users and problems being faced by the HEI libraries. The study found out that majority of the central libraries of HEIs in India are extending the IBLISs, but the range of services being extended is at varying levels. Particularly, majority of the HEI libraries are still to adopt the Web 2.0 based library services.

With the application of the emerging technologies the form and nature of libraries and library services are undergoing radical changes that would facilitate the academic needs of their users in more effective and efficient way. All the academic activities in the HEIs, as a matter of fact, the conventional libraries are transforming themselves into libraries without walls and Library 2.0 based. It is the Library 2.0 that utilises the Web 2.0 technologies to render more dynamic, proactive and wide range of services that are indispensible in the changing competitive world and academic environment. Provision of full range of IBLISs will certainly improve the quality and effectiveness of higher education in India.