HAS THE ONLINE RESOURCES CHANGED THE TRADITIONAL SERVICES OF IITs LIBRARY?

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ABSTRACT

States that over the last two decades, the electronic collections of IIT libraries have been growing steadily and this has changed the library services based on print resources. The study highlights the change (impact) and examines the projections of library administrators towards the impact. The results of the survey provide useful information regarding the impact of online resources on the traditional library services. This study will be beneficial for the recently established IIT libraries in developing their library services as per requirement of new users.

KEYWORDS: Traditional Library Service, On-Line Resources, IIT Library

Introduction

In independent India, one of the very few academic organizations that have acquired international recognition for excellence in performance is the chain of institutions known as the Indian Institute of Technology or more commonly the IITs. These premier institutes known to a large section of erudite Indians and today's bright youngsters aspire to study in one of them. The basic objective of the IITs is to impart excellent teaching in science and technology, to conduct research in the relevant fields, and to foster advancement in learning and dissemination of knowledge. Indian Institute of Technology (IIT) at Kharagpur (1951), Bombay (1959), Madras (1959), Kanpur (1961), Delhi (1962), and Guwahati (1994)

established as "Institution of National Importance" under the Institute of Technology Act, 1961. Finally, the oldest engineering university of the country, the University of Roorkee declared as IIT Roorkee through an ordinance. Subsequently, the "Parliamentary Act" amended in the year 2001. Eight new IITs have been established during the 11th five-year plan. Now these IITs are functioning in Bihar, Andhra Pradesh, Rajasthan, Himachal Pradesh, Orissa, Punjab, Madhya Pradesh, and Gujrat. Recently the Rajya Sabha has also passed the Bill to convert IT BHU has been declared IIT (BHU) in 1912 May.

Over the last two decades, the electronic collections of IIT libraries have been growing steadily. There are three types of material to be considered as well as we look at the migration from print to electronic format: reference works, journals, and books. The migration is nearly complete for the first two and has just beginning for the third. Bibliographic databases were the first to replace their printed version, followed by journals that now a days often appear in two formats- both in print and electronically. Compared to the printed books the proportion of e-books is still rather small but growing continuously. At present, the entire IITs library is getting access to more than 10,000 full text electronic journals and 6 bibliographic databases through INDEST consortia, which are more than five time journals in comparison to print journals accessible previously. Apart from this, a number of databases, standards, online multimedia courses, e-journals and e-books are being subscribed by the IITs library as per their own requirement to support their teaching and research.

Today, it is increasingly difficult to maintain and improve the usage rate of libraries due to the revolutionary changes in the technological, information and learning environment. Access to the Internet and availability of online resources is changing students, research scholar's and faculty member's information seeking behaviors, the way they conduct research, and their perception and use of library services. These changes are particularly challenging for IIT libraries that have to develop their collections and adopt their services in order to fulfill their mission to support teaching, learning, and research. Digital collections need not signal the death of the library, but to survive we need to develop a program that matches the needs of today's library user. Library services must address the needs of an increasingly online user. Services should focus on managing information resources and advanced applications of information technology, not on simple access.

With a significant increase in electronic information sources and its use by the IIT libraries, one logical question arise, how has this continuing increase affected the

services provided by the library? No attempt yet been made to carry out an evaluative study of the impact of online resources on the existing services and emergence of new services to fulfill the users need. This study will be beneficial for the librarians of new IITs established recently in developing and providing services to the users.

Review of the Earlier Studies

Although many articles have been written on electronic resources, Internet products & services, but few have actually addressed in quantitative terms the impact of such services on traditional library functions. There has been much discussion on the question of whether, or to what extent, the availability of electronic resources has resulted, or will result, in a declining demand for Interlibrary Loan and Document Delivery Services. However, even until date very few studies have done to know the impact on other valuable traditional library services. The Internet-based electronic resources (online resources) are growing dramatically; however, there have not been empirical studies evaluating the impact of e-resources, as a whole, on traditional library services. Some of the studies, which are directly or to some extent related to the present study conducted so far have been examined. Most of the early articles and discussions argue about the availability of electronic resources and their use, changing information seeking behavior, the use of collection and services, usage and subscription pattern of e books in IITs library and, evaluative studies of collection development programs in IIT libraries.

Despite one librarian's statement that, "electronic information isn't even designed for libraries or librarian's, but the end user (Chuck, 1995)." A number of research studies have been conducted all over the world to know the impact of online resources on library services. A common assumption is that converting library journals, books and databases to digital format will ultimately improve library service and lower cost, but this is yet to be proved. A direct cause-and-effect relationship between the increased availability of electronic resources and the decline in traditional use statistics is difficult to prove. Bravy and Feather (2001) analysed the data of 10 years (1989-1999) related to the photocopying, circulation, student check out transactions, and shelving of Georgetown University Law Center Library, Washington, D.C. to know the impact of electronic access on basic library services. He found that there is no way to directly link the circulation, shelving, and vending photocopying usage declines to electronic resources. Nevertheless, there are some strong indicators that the increased availability of electronic resources has

indeed been at least one of the factors contributing to these declines. Full-text electronic availability has been causing declines on demands for many academic library resources and services (Vaughan, 2003).

Another important study carried out to know the search behavior of users using the electronic resources at IIT Delhi Library (Naushad Ali, 2005). The study found that Boolean logic and transaction are the most often used search facilities by IIT users and 60 percent users face difficulties while browsing e-information. Another significant work on use of collection and services have been done by Krishna Kumar et.al (2010) which indicated that although general and reference books available in print form are mostly used by the users, a large number of users make use of resources and its number is increasing. Kaur (2011) examined the impact of electronic journals on the services provided by the university libraries of India. The study reported that majority of libraries saved time on checking print issues, claiming non-arrivals, cataloguing, and maintenance of print arrivals. The libraries under study indicated decrease in photocopying service, but increase in reference and interlibrary loan service.

Tyagi, (2011) conducted a questionnaire survey regarding the usage of electronic sources and services by the users of IIT Roorke Library and found that the interest towards the use of online journals is increasing. User's perception of e-resources as a replacement for print in meeting their information needs to a very high extent: e-resources have become a suitable replacement for printed materials. Faizul Nisha (2011) made a study to know the application and use of library Intranet services at the IIT Delhi and found that users are availing Intranet facility from their departmental labs, central library, and computers Centre not only for research purposes but also for preparing teaching assignment and to update their own knowledge. Users mostly use databases of research articles, followed by the databases of PhD theses and databases of serials. Singh (1999) conducted a comparative study of reader services provided by IIT libraries. It has found that reader services namely circulation, inter-library loan, reference, current awareness service, photocopy, translation, document reservation and bibliographical services exist in all the IIT libraries. The CDROM search was most popular service. Three of the total 05 libraries under study had started the process of transforming themselves into digital libraries.

No attempt has yet been made to carry out an evaluative study of the impact of online resources on the existing library services. That is why this study have been

taken. This study will be beneficial for the librarians of new IITs established recently for the enunciation of collection development policy and practices. Five IITs (IIT Kharagpur, IIT Bombay, IIT Delhi, IIT Roorkee, and IIT Guwahati) have been selected for the study.

Objective of the Study

The key objective of this study is to investigate the impact that online resources have had on the existing traditional services, and to identify the more significant trends associated with the library services.

Methodology of the Study

The purpose of this study is to gain an understanding of the change (impact) and examined the projections of IITs library administrators towards the impact of online resources on traditional library services. For this purpose, we have collected two types of information: primary and secondary. Primary information was collected from the library administrators, section In-charges and other staffs of the IITs library through survey methods (questionnaire). Secondary information for this research study was collected from the websites of libraries and annual report of the library. In order to overcome the limitations of the questionnaire method, a personal visit of the library under study was scheduled.

Result of the Survey

Impact on Traditional Services and Emergence of New Services

For this purpose, a checklist of three categories (services the library provide, services minimized, and services emerged) have been prepared and asked the library administrator to fill up. The results of the questionnaire have been discussed below.

Figure 1 shows the change reported by the library administrators towards the traditional library services. The most obvious aspect of the chart is that most of the libraries have responded that traditional services have gone down. Most of the libraries responded that they have started some new services to support on-line resources. The new services emerged due to on-line resources are Electronic Reference Service, Services related to which have web 2.0, portals (library, subject

portals), Information Alert service, Self Check in/Out etc.

It has been observed that now the focus of the libraries is to provide services at the place where the user wants, using the ICT. The libraries have developed portals and linked the services with it. Many traditional services have now been transformed and available electronically. All the libraries have either developed or created additional are space to provide Internet facility with adequate no of computer terminals with WI FI facility. The access to internet with WI FI facility is the most famous service among students provided by the library.
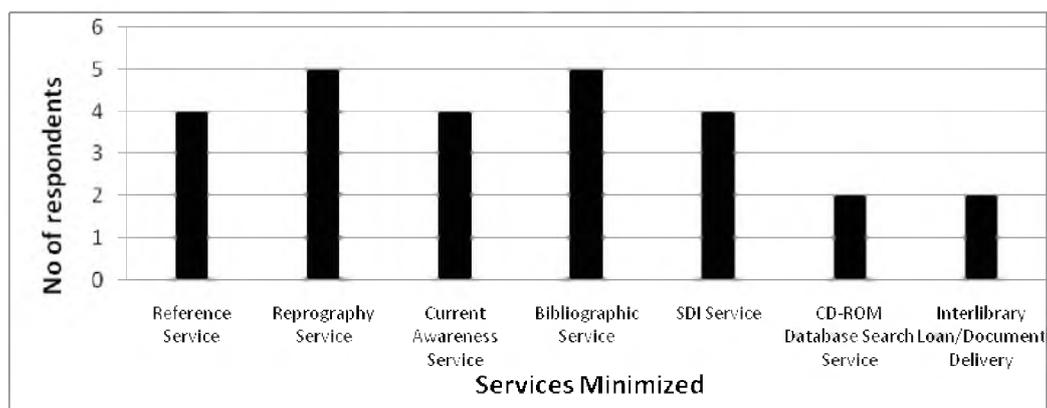

**Figure 1 : Opinion of Respondents Towards Impact on
Library Services (N=05)**

Impact of On-Line Resources on Library Services

The second section of the survey asked library administrators to give their opinion on the statements formulated regarding the impact that had on library services.

Statements: Circulation Service

    A.   The number of circulation of periodicals (loose and bound volumes) and monographs gone down, which are available online?

    B.   The implementation of Computerized Circulation Control System, OPAC and availability of On-Line resources had led to an increase in the number. of circulation of documents.

    C.   The number of circulation staff and working hours gone down.

    D.   Patrons are able to access e-books and other open access resources through Internet and this has reduced the number of issue/return from these sections.

Figure 2 shows that most of the IIT libraries witnessed decrease in circulation of periodicals (if issued) and monographs. However, in the response of statement B, three libraries responded increase in circulation keeping in view the Computerized Circulation Control System and OPAC linked with library web page. The concerned staff of the circulation section replied that the circulation section is witnessing less pressure in comparison to 10 years back. The implication of advanced technologies like RFD has minimized the time of issue/return of books. Implication of self check-in/checkout and renewal facility for patrons has also decrease the workload on circulation section.
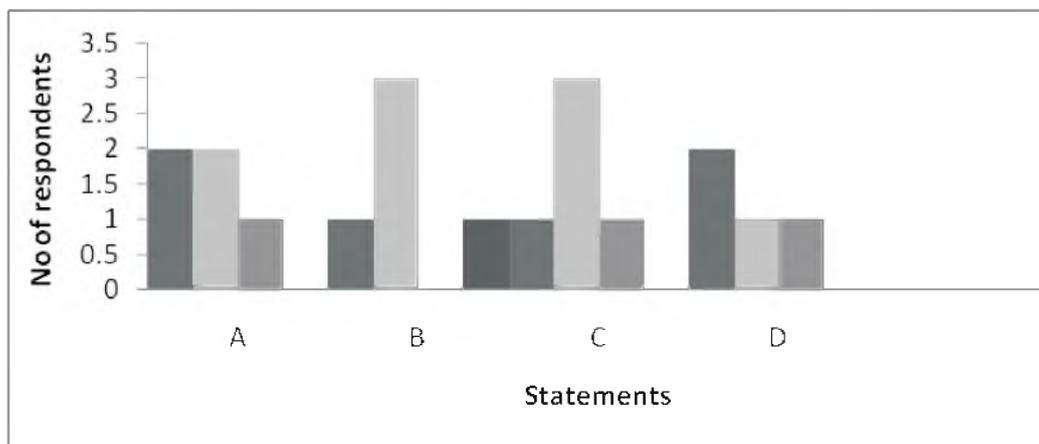

Figure 2 : Opinion of Respondents Towards Impact on Circulation Service (N=05)

Statements: Reference Service

A. Asynchronous tools such as e-mail, subject gateways, FAQ's, chat rooms, virtual reference desk, and ask-me are replacing the conventional means of post, phone or in-person reference inquiries.
B. Questions in the "electronic look up" category increased and questions answered using print resources remained about the same or decreased.
C. Reference staff are spending more time on user awareness programs through organizing workshops and vendor's presentations, to help users, understand how to use On-Line resources.
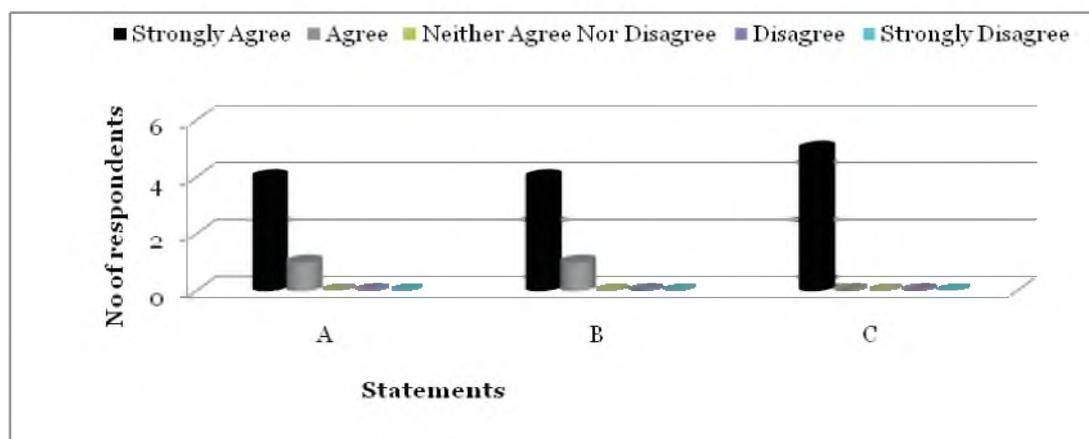
Figure 3 : Opinion of Respondents Towards Impact on Reference Service (N=05)

Figure 3 shows that majority of libraries feel that the asynchronous tools are replacing the conventional means of inquiries and questions in the "electronic look up" categories have increased. Libraries are also organizing user awareness programs and vendor's presentation to make aware the library user's how to use online resources?

Some libraries under study have provided Chatting facility with librarian, FAQs, and telephonic reference services. Most of the reference staff responded that now most of the questions asked by the users are electronic resource related. It has been observed that most of the libraries have created Reference Desk but very few users approach the desk to know the services because they mostly visit library web page to know the services and resources of library.

Statements: Reprography Service

A. Storage devices (CD-ROM, Pen Drive) provided library users a means of accessing information prior to obtaining the original document to photocopying and this has reduced the number of photocopying.
B. The availability of computer at desk with print out facility and the access of on-line journals have considerably reduced the demand for photocopying of journal articles.
C. The facility of taking print out of online resources, (article of journals, chapter of e books, etc.) has increased the number of exposures.
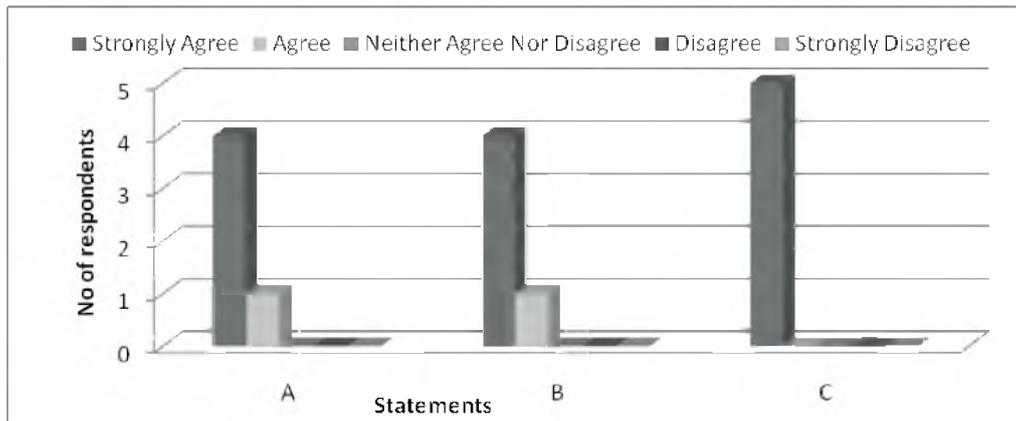
Figure 4 : Opinion of Respondents Towards Impact on Reprography Service (N=05)

In Figure 4, we can see that in response to first two questions regarding the opinion on decrease in number of exposure most of the respondents agreed with the statements. However, one respondent selected neither agree nor disagree option. It was observed that most of the libraries have outsourced the reprography service and provided space to vendors inside the library. The staff concerned with reprography witnessed that the number of exposure of journal articles has gone down after the inclusion of online journals and their back files.

Statements : Inter Library Loan (ILL)

A. The ICT and online resources provides more quick and accurate information on the location of desired ILL requests and this has led to an increase in the number of ILL requests received and sent to other institutions by us.
B. The medium of delivery of items have changed during the years and the Internet used for delivery of requests frequently.
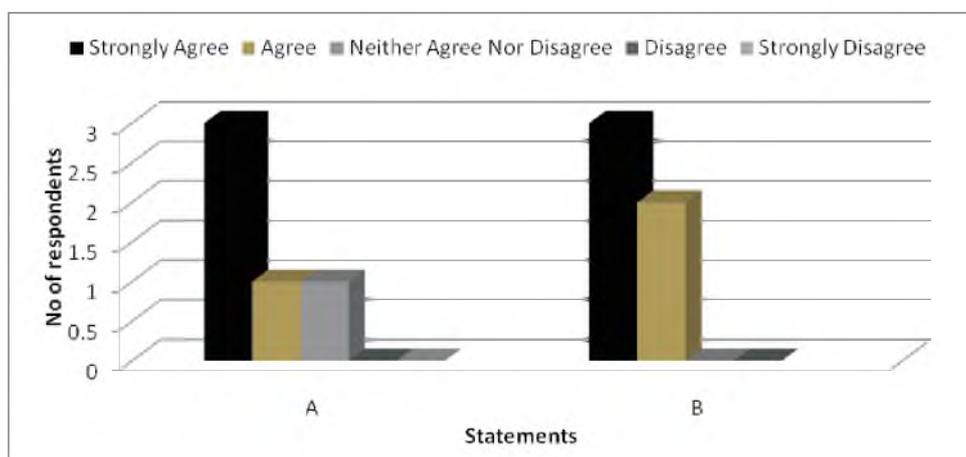
**Figure 5: Opinion of Respondents Towards Impact on
ILL Service (N=05)**

As can be seen in Figure 5, except one, four have responded that they either strongly agree or agree with the statement A & B. The libraries are now providing and getting documents through interlibrary loan in digital format also by converting hard copy into PDF. The concerned section In-charge responded that after the availability of Internet and the access to large number of online resources to the users, the mode and request of Interlibrary Loan service has change drastically. Now they use Internet as medium to provide this service.

Statements: User Awareness Service

A. The method of conducting User Awareness Program has changed drastically and now online vendors actively participate and guide library patrons in accessing on-line resources.
B. The growing number of online resources in library holdings has forced librarians to develop web based User Awareness Service. The library has started providing User Awareness services through their website. (Virtual tour, library announcement, FAQ'S, links resources etc.)

Subject specific Blogs and their RSS feeds make it easier than ever to keep up with the latest news, new books catalogued, announce the availability of new electronic resources, innovations, articles, and groundbreaking research as it has made available.
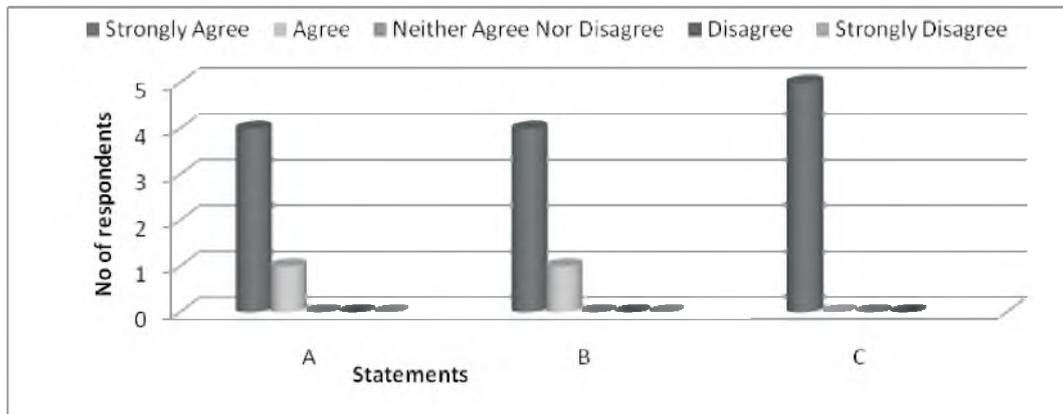
**Figure 6 : Opinion of Respondents Towards Impact on
User Awareness Service (N=05)**

Figure 6 shows, as expected, that the method used by the library for conducting User Awareness Program have changed and this reflects the impact of online resources on library services. All the participating library for this study responded strongly agree or agree on above-mentioned statements. It was observed that most of the libraries provide information regarding the library resources, services, work force, working hours etc. on the library web page to guide users. Training sessions are also organized with the vendors whenever a new electronic product is introduced.

Statements : Bibliographic, Internet and Membership Services

A. Traditional Bibliographic Services have been replaced by the electronic and online databases and the staff engaged in compilation of bibliography shifted in other departments.
B. The subscription of online journals, books, and databases has forced librarians to extend the facility of Internet browsing at hostels and chambers of faculty with high speed.
C. The membership is decreasing because the resources are available on the desktop of patrons without getting membership.
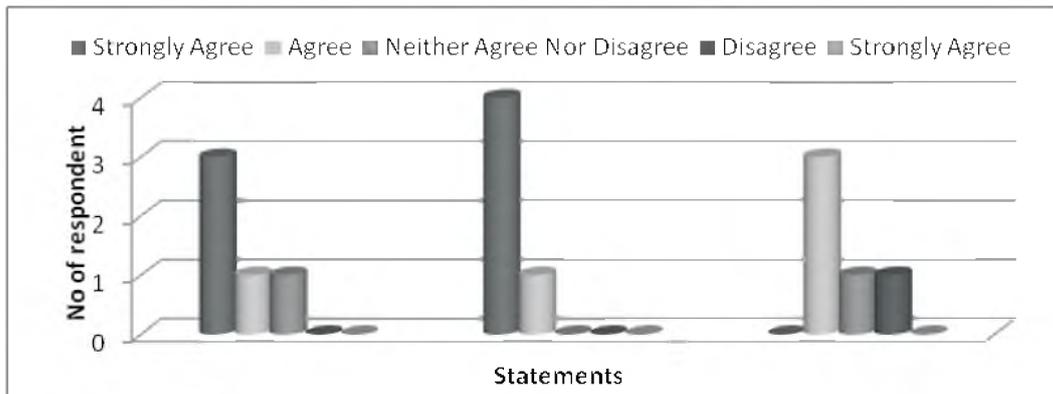
**Figure 7 : Opinion of Respondents Towards Impact on
Bibliographic, Internet, and Membership Service (N=05)**

Figure 7 relates to the impact of online resources on Bibliographic service, library membership, and the Internet use. For the statement A, three library responded strongly agree, one agree, and one neither agree nor disagree. The personal observation is that online databases and In-house databases have changed the traditional bibliographic service; the facility to access library resources from desktop has decreased the membership and forced librarians to extend the services to the desktop of users.

The author observed that on-line databases have minimized the bibliographic services of the libraries. It has been also observed that the membership is decreasing, particularly the number of faculties. To attract the users, most of the libraries have allowed users to come with personal books and laptops in the library. To provide 24x7 hours access of library resources, the library has provided access to all its resources on the desktop of users sitting either in their departments of hostels.

Possible Future Effect

The third section of the survey asked library administrators to have their opinion on the statements formulated regarding the impact that on-line resources will have in future. For this purpose, five statements were formulated with three related statements:

1) How likely is this change to occur?
2) When do you think this change will be a general fact?
3) What degree of impact will this change have on library services? The opinion of respondents has been given in tabular form.

Table 1: Probable Future Effect of Online Resources on Traditional Library Services

Statements	How likely is this change to occur?	When do you think this change will be a general fact?	What degree of impact will this change have on library services?
A. The circulation desk will link patrons with their desired documents instead of issuing physical documents.	Very likely (40%) Likely (40%) Not likely (20%)	2015(40%) 2020+ (40%) Uncertain (20%)	Great (40%) Moderate (20%) Little (20%) No (20%)
B. Personal portable libraries in the hands of people rather than organizations will be reality due to advancement in smart phone.	Very likely (40%) Likely (20%) Not likely (20%) Never (20%)	2015(40%) 2020+ (40%) Uncertain (20%)	Great (20%) Moderate (40%) Little (20%) Uncertain (20%)
C. Account management, catalogue search, and downloading of articles will be common through smart phones.	Very likely (20%) Likely (80%)	Now (20%) 2015(40%) 2020+ (40%)	Great (40%) Moderate (60%)
A. Some library services will be outsourced.	Very likely (20%) Likely (60%) Not likely (20%)	Now (20%) 2015(40%) Uncertain (40%)	Moderate (60%) Little (20%) Uncertain (20%)
E. Research and Information Management Services (such as data mining) will displace "reference" as the front- line service for the patrons.	Very likely (40%) Likely (40%) Not likely (20%)	Now (40%) 2015(40%) Uncertain (20%)	Great (60%) Moderate (20%) Uncertain (20%)

Table 1 show, as expected, that the most of the library administrators are having view that in near future, the role of on-line publisher is going to increase in providing some library services. In the response of possibility of outsourcing some library services, 60% of the respondent said that likely it will happen and its impact on library services will be moderate. In the response of statement E, 80% of the respondents were having view that very likely or likely, this will happen and its impact on library services will be great.

Findings of the Study

? Most of the IIT libraries have minimized or closed some traditional library services after the inclusion of on-line resources in their holdings. Some services transformed due to ICT application. The services are SDI,

Bibliographical service, Reference service etc.
? Some new services based on Web 2.0 technology have been introduced by the library to support the best use of existing online resources.
? The online accessibility of journals, books and databases have decreased the circulation of books and number of staff working at circulation counter.
? The number of exposure of journal articles decreased and the printout of on-line articles increased in most of the libraries.
? The library is providing library services and resources through network and most of the services are now available at the desktop or laptop of users.

Conclusion

Availability and access of online resources have definitely affected the way the library users access information and the library provides it. All the participating libraries responded that the emphasis is now shifting to provide the document and services at the place where user wants instead of visiting the library to get the information and document of his desire. Libraries have started some new services applying web2.0 technology and minimized or stopped some traditional services.

The accessibility of online resources at researcher's workplace has decreased the dependency of academics (in terms of physical presence at library) on library and now they hardly visit library. It appears that in near future, some library services will be outsourced by the library and the Personal portable libraries in the hands of people rather than organizations will be a reality due to advancement in smart phone. Libraries will have to provide services in the form in which user want and at the place where user need for maintaining their relevance in near future in academic community.

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