Use of IT and Its Impact on Service Quality in an Academic Library

Gulam Rasul
Institute for International Management and Technology, gulamrasulz@yahoo.com

Ashok Kumar Sahu
Institute for International Management and Technology, aksahu@iimtobu.ac.in

Use of IT and Its Impact on Service Quality in an Academic Library

Gulam Rasul
Asst. Librarian
Institute for International Management and Technology
Gurgaon, Haryana

Ashok Kumar Sahu
Senior Librarian
nstitute for International Management and Technology
Gurgaon, Haryana

Introduction

Information technology has profound effect on the progress and development of human civilization. The advances in science and technology has made a tremendous improvement and changed all activities of present society. Due to revolution of information technology, increased tremendously demand, consumption, and importance of information in present society. The librarians are faced challenges to managing massive volume of information for storage, process, retrieve, and disseminate in libraries (Ramana, 2004). Rapid advances in Information Technology in the past two decades have brought revolutionary changes in the concept, organization, functioning and management of library and information systems through out the world. The modern technology has greatly improved the capabilities of managing this explosive growth of information effectively. Information technologies today are characterized by their very dynamic development and increasing complexity. Information technology application in library and information field has made remarkable progress in the world. Information Technology not only affects the technical services of libraries but also shapes the library services that are being offered to the public. Worldwide libraries have been exploring new technologies for providing better and faster access to vast information resources and efficient information services to their users. Information Technology has offered better solutions to achieve greater level of efficiency, productivity and excellence services in libraries (Cholin, 2005).

Information Technology Trends in Academic Libraries

The advent of information society can be traced to 1960s when a shift occurred from the industrial processes to a service based economy. Since 1960s, libraries worldwide have been using technology in general and computers to automate the administrative & technical tasks of the library (Raman, 1998). In India, computerization of library had started in the year of 1955 at Indian Statistical Institute, Calcutta. During 1970s DRTC, BARC, TIFR, IIT-Madras, and BHEL- Hyderbad have been used production of information product and

services (Raman, 1998). Every facet of library work, in academic, school, public, and special libraries, is being transformed as a result of technological advances. Among the changes are: increased database access through CD-ROMs, local mainframes, or dial-up services; a shift in the focus of library instruction toward skills for using computer-based information systems; and the provision of access to local collections for remote users, and to remote collections for local users. The World Wide Web became a significant vehicle for distributing information. Information technology has emerged as the most potent tool to collect, organizes, and disseminates information to the people at large scale through communication network. Internet brought the biggest change in libraries as 1990s saw the rapidly increasing availability of access to computers generally. The Information and Communication Technologies (ICT) have brought revolutionary changes in handling delivering and storage of information. The transition of traditional library collections to digital or virtual collections presented the librarian with new opportunities and challenges.

Libraries in India have struggled with many problems, but recent government support for research has provided an opportunity for the development of library services and increased access to information. Government encouragement of funding of private organizations through tax benefits has also led to investment in libraries and information as part of research activities (Ashraf, 2008). The internet, especially WWW has given the librarian a new dynamic role to play in the society and serve the new information based in better ways than every before, because of the powerful features of web i.e. distributed, heterogeneous, collaborative, multimedia, Standards and Protocols, architecture, world wide web has revolutionized the way people access information and has opened up new possibilities in areas such as digital libraries, Virtual libraries, efficient information retrieval and dissemination.

INFLIBNET has played major role in bringing IT culture and establishing IT infrastructure in Indian Universities. It is involved in modernizing university libraries in India. To create awareness about library automation and spread IT culture among library professionals, INFLIBNET organizing INFLIBNET Regional Training Programme on Library Automation (IRTPLA) in different regions of the country. Recently it has initiated subscription of the E-Journals for academic libraries in India. INFLIBNET has played major role in library automation. SOUL designed and developed by INFLIBNET, which is cost affective and user friendly software has been installed in 170 universities/institutions (INFLIBNET, 2003).

Application of IT in Academic Libraries

The application and accessibility of IT facilitates the free flow of information, creative expression and effective management. The major factors and challenges forced the libraries to adopt Information Technology such as Information explosion, Technological development, Provide efficient and effective services, Increased number of users, Increased the expectations of the users, Online Information retrieval, Increase the commercial information providers , and Changes the nature of Information resources (E-Journals, CD-ROMs, and Online Databases etc.) (Davarpanah, 2001).

Libraries are using the Information Technology in general and to automate a wide range of administrative and technical process, build databases, networks and provide better services to their users. The use of IT has become imperative for the efficient management of modern libraries. Library Automation is one of the major applications of IT in libraries. It is helped to change the libraries In-house activities (Acquisition, Cataloguing, Indexing, Serial control, Circulation etc.) from manual system to automation (Venkataraman, 1998). In 1980s, most of the libraries were computerized their in-house activities. Recently, libraries have to implement increasingly complex solutions that involve distributed networking and access to remote information resources. The use of IT in libraries has tremendously increased due to its enhanced user satisfaction, cost effectiveness, faster and simpler programs, rapid communicative interaction and easier operational procedures (Storey, 1995).

Effective use of IT in libraries increase efficiency in operations, eliminates repetitive nature of works, improves the quality and range of services, facilities easy and wider access to all kinds of information sources, facilitates faster information communication, increase moral and motivation of library staff, facilitates cooperation and resource sharing, save time,

space, improves productivity and image of library (Venkataramana, 1998).

The electronic resources that are available in libraries are an outcome of the advances in both computer technologies, including information storage and delivery mechanism, and software providing user friendly interfaces. In most of the libraries in the western countries, Online Public Access Catalogues (OPAC) have almost replaced card catalogues, offering enhanced search capabilities for accessing the collection of library. Many libraries also provide a web interface to their library and information system, often including direct links of electronic journals, books and internet resources (Cholin, 2005).

Impact of Information Technology on Library Services

The growth of information and the dependency on it have paved the way for the information society and subsequently the knowledge society. Information has always been prime factor for the development of society and is often regarded as a vital national resource. Information services try to meet this objective. Information has become important part of our lives and should be available when needed. Information services are generated using new tools and techniques to facilitate the right users to the right information (Khodeh and Dhar, 2002). The implementation of information technology in the libraries has demanded new forms of library services to get more user satisfaction. Digital library service has evolved after the implementation of IT in the library and information centers. Information technology has had a significant impact and has successfully changed the characteristics of information services being generated in libraries. The past two decades have seen great changes in library due to information technology. The technological advancement have made significant impact on the growth of knowledge and unlocking of human potential. In library, the impact is clearly visible on information resources, services, and people (Manjunatha, 2007).

One of the distinct gifts of information technology has been the invention of devices with huge storage capacity. CD-ROM's, DVDs and flash memory cards have changed the face of libraries. Online access to information has turned many libraries into "Virtual Libraries" (Mishra, 2001). Now Libraries are changing the way in which information is stored and disseminated to users.

The next benefit of IT is the automation of library activities. Many in-house operations in the library like acquisition, processing, circulations, maintenance, serial management are changed manual to automation. The need for automation arises as to reduce the effort a time required for these jobs. Now many softwares are available in market for library automation. IT has helped in establishing library networking and resource sharing through internet and intranet. Library networks have expanded the limitation of the scope of resource sharing and information exchange. Today internet is the major resource for librarians. Application of IT has contributed the improvement in provision of quick, quality services in the libraries.

Another impact is remote access of variety of commercial and non commercial information sources i.e. online full text databases, e-journals, e-books, library catalogue (OPAC) etc. The present day information seekers can access the worldwide information through internet on their desktop without any time limitation.

Library Service Quality

The concept of service quality in the context of a library can be defined as the difference between user expectations and perceptions of service performance. In the library, quality may be recognized by the customers in terms of prompt delivery or lack of error in services. Quality can also be seen as relating to the fitness of a service or product to its intended purpose or use, subject to the expectations of the customer or user. Quality becomes a big issue when libraries try to expand their scope and improve their service. Quality, therefore, must be in conformity with the customer's requirements or needs. This means that the quality of a service can be a definition of the customer's perception of what is good or bad, acceptable or not acceptable service. (Sahu, 2006)

The service quality measurement is essential to know the user expectation and perception on library services. Zeithaml, Parasuraman, and Berry identify the five service quality dimensions and also use them to develop a model of service quality which is commonly known as the Gaps Models. To measure those gaps, Zeithaml, Parasuraman, and Berry(1998) developed 22 item questionnaire called SERVQUAL. The Gaps Model and its SERVQUAL instrument is probably the most frequently used approach to discuss and measure service quality. The Gaps Model provides valuable insight into understanding challenges of delivering quality service. (Fitzsimmons, 2000)

In India, service quality is a new concept for the service industries. As a result most of the academic libraries in India are now implementing quality management for developing the standard of services and to satisfy the demands of users.

Objectives of the Study

The aim of this study is to measure the impact of Information Technology (IT) on quality of service as perceived by IIMT Library users, to determine how far the library has succeeded in delivering such service to its users, and understand the status of IT supported resources, facilities & services in IIMT Library. The objectives of this study are:

- To determine the impact of IT on library services as perceived by the students and staff of IIMT.
- To access user expectation, perceptions of service quality and gaps in perceived services quality in IIMT Library.
- To know the status of use of IT in IIMT Library.
- To make recommendations on how to improve the level of services quality.

IIMT Library Overview

The Institute for International Management & Technology (IIMT) is a privately funded institution of higher education located in Gurgaon in the National Capital Region (NCR Delhi). Its long-term objective is to provide internationally recognized undergraduate and postgraduate programmes of study in the professional area of hospitality and tourism management, information technology and business management. The institute was established in the year 2000 with the active support of corporations such as - The Carlson Group - USA, the Edwardian Group - UK, and Unitech India. IIMT has established the two schools 1.School of Hospitality and Tourism Management (SHTM) 2.School of Management and Entrepreneurship (SOME). IIMT has total 25 dynamic faculty members on different subjects. And total 600 hundred students are joined on both schools.

The state-of-art IIMT Library has equipped with multimedia facilities is a student's delight. It uses Libsys Software, which is an integrated multi-user library management system that supports all the library activities. It is a lively place of the institute providing a safe, comfortable and friendly environment that enables learning and advancement of knowledge, and promotes discovery and scholarship. It has a rich collection of over 10,000 books, 200 video/audio cassettes and 1000 DVD/CD-ROMs on different subjects such as Business Management, Hotel Management and Information Technology. It houses 200 national and international journals. The IIMT Library provides the facility to all users to browse the library collection through online catalogue-OPAC (Online Public Access Catalogue). It has also providing facilities to access internet and online databases inside the library. IIMT Library has connected with Wi Fi network. Total 10 computers are available inside the library for student to access online databases. It has total 700 users both student, faculty. It is also providing inter library loan, reference services, reprography services to library users. It is subscribing various online databases in the field of Business Management, Hospitality Management, Finance, Economics etc. It is also providing different user awareness programmes for its user to familiarize and use of the various library resources & services available for them.

Methodology

The research was carried out among the students and faculty members of the IIMT Library. This research study is to measure the impact of Information Technology (IT) on quality of service as perceived by IIMT Library users. The study has a total sample of 80 from 100 questionnaires issued, among them 75 students and 25 faculty members. The samples were randomly selected from out of the regular users of IIMT library. The advantage of a random sampling method is that the results can be analyzed faculty-wise and student-wise, drawing certain conclusions from each category of respondents.

Both qualitative and quantitative data were collected. The instrument for data collection consisted of structured (open/closed-ended) questions. The questionnaire was administered to a sample of students and faculty members to collect data on their perceptions of quality of service with application of IT at IIMT library.

Questionnaire

The present study used survey method to approach the respondents through questionnaire as an instrument for data collection. The framework was developed using the variables suggested by Parasuraman and his team (Parasuraman, 1988). SERVQUAL was used as tool for data collection which developed by Parasuraman and his team . It consisted of structured, open-ended and closed questions. The questionnaire consists of four parts such as namely respondent's demographic features, expectations, perceptions, overall ratings. The first part consists of personal and demographic information of respondents. The second and third part contains 29 questions each related to expectations and perceptions on library. All the closed ended questions were designed to be responded to on a five point Likert scale to measure both respondent satisfaction and perception of service quality. The fourth part was contains variables to measure respondent's overall satisfaction level, overall rating of service quality, adequacy of print and electronic resources, IT based facilities and services, and willingness to spread word of mouth recommendations among friends.

Data Collection, Analysis, and Findings

A total of 100 questionnaires was distributed among the students and faculty members of Institute for International Management and Technology (IIMT). Questionnaire is consisted of structured close-ended and open-ended questions. From 100 questionnaires, 80 responses were received. This represents an effective response rate of around 80% of the total sample. Statistical methods are used to give a general picture about the result of this study. The data is analysed using SPSS software. Statistical tools like frequency distribution, Compare means, factor analysis, GAP analysis were used to analysis the data. And some responses are presented in graphically.

Data Analysis

The present study evaluates the status of technology and service quality at IIMT Library from user perspectives. The primary data is obtained through print questionnaires. Total received 80 completed responses from users of IIMT Library. This represents an effective response rate of around 80% of the total sample.

Demographic Characteristics of Respondents

Out of 100 questionnaires, 75 questionnaires were distributed among the students and 25 questionnaires distributed among faculty members. But received 60 responses from the students (the rate of around 80%) out of the total 75 questionnaires. And received 20 responses from the faculty members (the rate around 80%) out of the total 25 questionnaires. The total sample includes 57.5% male and 42.5% female respondents.

Frequency of Library Visit and Time Spent in Library

As per the table-1, it is observed that 53.75% of the sample visits library daily and 30% visit once in 2-3 days. Further, 11.25% users visit library once a week and 3.75% users visit library fortnightly. Table-1 shows that 1.25% users visit library occasionally. The statistical data (Table-1) has proved that maximum users daily visit the IIMT library.

The statistical table shows that 47.50% of respondents spend less than 1 hour and 28.75% spend 1-2 hours in the library. It means a majority of sample spend less than 2 hours during their visit library. And 15% respondents spend 2-3 hours in library. It indicates that, in the age of Internet the library resources can be accessed even outside the library. Now day's maximum library resources are available in electronic media. Due to photocopying and scanner facilities, it helps the users to making photocopy or scanning their required materials without spending much time in the library.

Table 1: Frequency of Library Visit and Time Spent in Library

	Frequency	Total Nos.	Percentage
	Daily	43	53.75%
	Once in 2-3 Days	24	30%
Library Visit	Once in a Week	9	11.25%
	Once in 15 Days	3	3.75%
	Occasionally	1	1.25%
	Less than 1 Hour	38	47.50%
	1-2 Hours	23	28.75%
Time Spent in Library	2-3 Hours	12	15%
	3-4 Hours	4	5%
	4-5 Hours	2	2.50%
	5hrs - Above	1	1.25%

User Expectations

The user expectations are measured by asking the respondents to indicate the extent to which specific items identified for the current research are important for a good library. The rating are obtained through Likert Scale from "1" for least important to "5" for very important. In Table 2, the individual features are arranged on descending order as per their mean score indicates priorities in user expectations.

Table 2: Ranking of User Expectations

				Standard

Sl.No.	Items	Mean	Deviation
28	Staff who understand the specific needs of users.	5.14	5.69
26	Provision of "Right Document the Very First Time"	5.06	6.82
25	Staff's sincere interest/willingness to help users	4.6	0.7
29	Knowledge/competence of staff to answer user's queries	4.58	0.63
4	Comprehensive Print Resources like Books, journals	4.55	0.76
12	Internet connectivity	4.5	0.8
14	Subscription to e-journals/full-text databases like EBSCO, IEEE, PROQUESTetc...	4.5	0.8
3	Convenient library working hours	4.43	0.76
13	Subscription to statistical/bibliographical databases like CMIE, Indiastat.com, Capitaline etc...	4.4	0.8
24	Ability to deliver the promised services in time	4.4	0.8
27	Staff who instill trust/confidence in users	4.5	0.6
2	Easy physical access for a good library	4.37	0.83
6	Proper arrangement of Print Resources in the library	4.34	0.84
11	Well maintained computer & equipment in the library	4.23	0.94
16	Easy-to-use library on-line catalogue (OPAC)	4.2	0.8
23	Library's ability to promise products/services to users by a certain time (commitment)	4.2	0.8
15	Automated Library operations and services	4.19	0.89
1	Spacious & modern looking building for a good library	4.15	0.9
19	Provision for on-line reservations/renewals	4.13	1
22	Error free records in the library	4.11	0.99
17	Remote (LAN/campus-wide) Access to Library Resources	4.1	0.9
5	Good Collection of Electronic Resources like CDs/VCs/e-books.	4.05	0.95

18	Making library resources available through Website	4.01	1.03
21	Library's networking/collaboration with other libraries for interlibrary lending	4	0.9
9	Scanners in the library	3.9	1
20	Speed of response for Queries via LAN/Internet	3.9	1
7	State-of-Art computers in the library	3.88	0.86
10	Electronic security/burglars in the library	3.8	1.2
8	Laser Printers in the library	3.6	1.1
	Average of Expectations:	4.26	1.24

The overall average expectation score (4.26) indicates user's high level expectations on library resources and services. As per Table 2 some features are high expected (mean > 4.26) and some less expected (mean < 4.26).

User Perception of Library Services

Perception means customer experiences or feelings about the product or services provided by the specific organization. The user perceptions are measured through 29 statements. The rating are obtained through Likert Scale from "1" for strongly disagree to "5" for strongly agree. In Table 3, the individual features are arranged on descending order as per their mean score.

Table 3: Ranking of User Perceptions

Sl.No.	Items	Mean	Standard Deviation
25	Staff's sincere interest/willingness to help users	4.537	0.654
27	Staff who instill trust/confidence in users	4.425	0.655
29	Knowledge/competence of staff to answer user's queries	4.525	0.762
28	Staff who understand the specific needs of users.	4.512	0.693
3	Convenient library working hours	4.325	0.775
4	Comprehensive Print Resources like Books, journals	4.212	0.757
6	Proper arrangement of Print Resources in the library	4.212	0.937
12	Internet connectivity	4.212	1.259

14	Subscription to e-journals/full-text databases like EBSCO, IEEE, PROQUESTetc...	4.150	0.901
26	Provision of "Right Document the Very First Time"	4.150	0.797
2	Easy physical access for a good library	4.112	0.779
24	Ability to deliver the promised services on time	4.087	0.782
23	Library's ability to promise products/services to users by a certain time (commitment)	4.062	0.717
1	Spacious & modern looking building for a good library	3.887	0.913
13	Subscription to statistical/bibliographical databases like CMIE, Indiastat.com, Capitaline etc...	3.850	1.126
16	Easy-to-use library on-line catalogue (OPAC)	3.825	1.088
15	Automated Library operations and services	3.737	1.166
22	Error free records in the library	3.700	0.933
5	Good Collection of Electronic Resources like CDs/VCs/e-books.	3.500	1.180
11	Well maintained computer & equipment in the library	3.487	1.368
9	Scanners in the library	3.312	1.563
17	Remote (LAN/campus-wide) Access to Library Resources	3.025	1.550
8	Laser Printers in the library	2.975	1.630
20	Speed of response for Queries via LAN/Internet	2.962	1.570
7	State-of-Art computers in the library	2.900	1.327
19	Provision for on-line reservations/renewals	2.800	1.795
21	Library's networking/collaboration with other libraries for interlibrary lending	2.800	1.656
10	Electronic security/burglars in the library	2.675	1.741
18	Making library resources available through Website	2.525	1.582
	Average of Perceptions:	3.709	1.126

The respondent's overall perception score (mean) is 3.709. This average perception scores

(mean) is below the expectation score (mean) 4.27. It indicates that low perceptions towards IIMT Library services. As per Table 3, the maximum perceived items are better (mean > 3.709). And few items are least perception scores (mean < 3.709).

Gap between User Perceptions and Expectation on Service Quality

The service quality measured as difference between user perceptions and expectation on library services. The magnitude of discrepancy indicates how well the facilities and services provided in the library match with user expectation. According to Zeithaml, Parasuraman and Berry(1999) "More negative the score, more the service quality shortfall in the eyes of customer". The Table 4 presents the mean gap scores for individual features in descending order.

Table 4: Gap Between User Perceptions and Expectation On Service Quality

Sl.No.	Items	Expected Mean (E)	Perceptions Mean (P)	GAP (P-E)
18	Making library resources available through Website	4.01	2.525	-1.485
19	Provision for on-line reservations/renewals	4.13	2.800	-1.33
21	Library's networking/collaboration with other libraries for interlibrary lending	4	2.800	-1.2
10	Electronic security/burglars in the library	3.8	2.675	-1.125
17	Remote (LAN/campus-wide) Access to Library Resources	4.1	3.025	-1.075
7	State-of-Art computers in the library	3.88	2.900	-0.98
20	Speed of response for Queries via LAN/Internet	3.9	2.962	-0.938
26	Provision of "Right Document the Very First Time"	5.06	4.150	-0.91
11	Well maintained computer & equipment in the library	4.23	3.487	-0.743
28	Staff who understand the specific needs of users.	5.14	4.512	-0.628
8	Laser Printers in the library	3.6	2.975	-0.625
9	Scanners in the library	3.9	3.312	-0.588
5	Good Collection of Electronic Resources like CDs/VCs/e-books.	4.05	3.500	-0.55
13	Subscription to statistical/bibliographical databases like CMIE, Indiastat.com, Capitaline etc...	4.4	3.850	-0.55
15	Automated Library operations and services	4.19	3.737	-0.453

22	Error free records in the library	4.11	3.700	-0.41
16	Easy-to-use library on-line catalogue (OPAC)	4.2	3.825	-0.375
14	Subscription to e-journals/full-text databases like EBSCO, IEEE, PROQUESTetc...	4.5	4.150	-0.35
4	Comprehensive Print Resources like Books, journals	4.55	4.212	-0.338
24	Ability to deliver the promised services in time	4.4	4.087	-0.313
12	Internet connectivity	4.5	4.212	-0.288
1	Spacious & modern looking building for a good library	4.15	3.887	-0.263
2	Easy physical access for a good library	4.37	4.112	-0.258
23	Library's ability to promise products/services to users by a certain time (commitment)	4.2	4.062	-0.138
6	Proper arrangement of Print Resources in the library	4.34	4.212	-0.128
3	Convenient library working hours	4.43	4.325	-0.105
27	Staff who instill trust/confidence in users	4.5	4.425	-0.075
25	Staff's sincere interest/willingness to help users	4.6	4.537	-0.063
29	Knowledge/competence of staff to answer user's queries	4.58	4.525	-0.055
	Average of Mean:	4.26	3.709	-0.563
	Median	4.2	3.85	-0.453

The overall gap score (mean-0.563) below the median score (-0.453) indicate the shortfalls in existing library resources and services against customer expectations. As per the Table 4, all features have experienced noticeable gaps, about 14 features experienced high gaps (> -0.453) and 15 features experienced low gaps (< -0.453) by users inviting attention of service providers. The features that experience high gaps are related to IT Supported resources and facilities. It indicates that the library staffs will give more attention towards least perceived items such as electronic resources and IT equipments & services.The high gap features are indicated the need for immediate attention by library staff. And low gap features are indicating to improvement and suggest for further development.

Overall Ratings of User Perceptions on Library Services

User satisfaction or dissatisfaction arises during users encounter with the system. The perception of service quality is depending upon overall satisfaction of the user. The current research uses two approaches to assess the overall service quality of IIMT library from user perspective. The first approach is to measure the service quality as the difference between user perceptions and expectation. The second approach is the direct measure of overall

user satisfaction through a question. The respondent requested through a set of six questions to indicate their overall satisfaction level, overall rating on print & electronic resources and services, and word of mouth recommendation on a five point scale. The response is graphically presented in Fig-1.
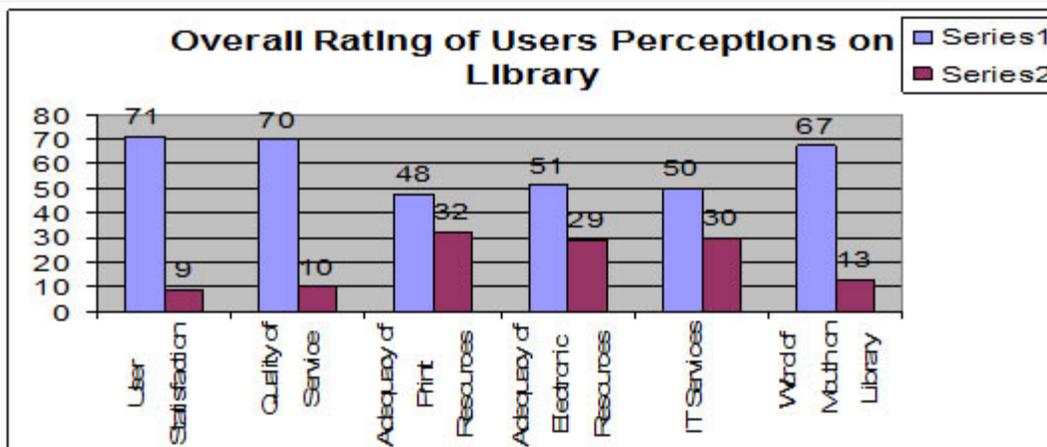

Fig.1: Overall Ratings of User Perceptions on Library

The total 71 (88.75%) respondents out of 80 are overall satisfied on library facilities and services and 09 (11.25%) respondents not satisfied. As per the above figure 70 (87.50%) respondents are judged good quality of services provided at IIMT library and 10 (12.50%) respondents judged quality of service is very poor. And also 67 (83.75%) users are agreed to spread good words about their library and 13 (16.25%) users not to be agreed to spread good words about IIMT library. The following three features 1. Adequacy of print resources, 2. Electronic resources and 3. IT Services are approximately 60% users rated good and adequate and 40% users rated very poor. As per the analysis, the library staff should give more attention about these three features.

Discussion of Results

In this study, the user expectations and their perceptions of quality of resources and services in their library was measured by using SERVQUAL instrument. As per the data analysis, it is observed that 53.75% of the sample visits library daily and 30% visit once in 2-3 days. Further, 11.25% users visit library once a week and 3.75% users visit library fortnightly. Table 1 shows that 1.25% users visit library occasionally. Table 1 has proved that maximum users daily visit the IIMT library. Due to high cost of the foreign text books and journals, the maximum users are visiting the library regularly. The statistical table shows that 47.50% of respondents spend less than 1 hour and 28.75% spend 1-2 hours in the library. It means a majority of sample spend less than 2 hours during their visit library. And 15% respondents spend 2-3 hours in library. It indicates that, in the age of Internet the library resources can be accessed even outside the library. Now day's maximum library resources are available in electronic media. Users can easily access the library resources through network and internet, which may not insist physical visit to the library.

User Expectations

The user's expectation level is high (mean 4.26 on 5-point scale) regarding library resources, services and facilities. The high level could be due to enhanced awareness and technology facilitation.

User Perceptions

The respondent's overall perception score (mean) is 3.709. This average perception scores (mean) is below the expectation score (mean) 4.27. It indicates that low perceptions

towards IIMT Library services. It indicates that the library staffs will give more attention towards least perceived items such as electronic resources and IT equipments & services.

As per Table 4, there exists gap between user expectation and perceptions. The negative values indicate magnitude gap in user's assessments. Though all the features experienced considerable gaps, noticeable gaps are observed in half of the key features on services quality inviting more attention from library staffs. The following features are high gaps such as

- Available library resources through website
- Online renewal and reservation facilities, networking
- Electronic security system
- Remote access of library
- Speed of Internet, latest computer facilities
- Subscription of more statistical and article online databases.

IIMT library has only three online databases such as PROQUEST, INDIA STAT, & CAPITALINE database. As per user perceptions, need to be purchase more online databases for IIMT Library. And also to be providing latest computer facilities, increase the bandwidth of internet in the library.

Conclusion

Libraries are using information technology ito automate a wide range of administrative and technical processes, build databases, networks, and provide better services to their users. IT in libraries helps in performing operations and services efficiently. The application of IT and accessibility of IT facilitate the free flow of information, creative expression, and effective management. The current research has investigated the status of technology in IIMT Library. The overall assessment of service quality and user satisfaction is moderate, indicating wide scope for improvement. The following three features 1. Adequacy of print resources, 2. Electronic resources and 3. IT Services were rated particularly low. As per the analysis, the library staff should give more attention to these three features. Improving performance requires paying attentions to the key features by which users access the service quality and it involves commitment from management and library staff.

References

ASHRAF (Tariq), Implications for Library and Information Services: Study of India's IT revolution and public policy. In Sahu, (Ashok) *Information Management in new millennium: Opportunities and challenges for library professions*, New Delhi: Ess Ess Pubication, 2008, p.236.

BRENNAN (Mary Alice), Trends & Issues in Library & Information Science 1990. ERIC Digest, Nov.1991 Available online http://www.ericdigests.org/1992-4/library.htm

CHOLIN (V S) Study of the application of information technology for effective access to resources in Indian universities libraries. *The International Information & Library Review*, 37, 2005, p.189-197.

DAVARPANAH (M R). Level of information technology application in Iranian university libraries. *Library Review*, 50(9) 2001, p.444-450.

FITZSIMONS (J A), and FITZSIMONS (M J) *Service Management: Operations,Strategy, and Information Technology*, (3rd ed.) 2000. Boston, McGraw-Hill, 43-67.

History IIMT, Available online www.iimtobu.ac.in

INFLIBNET, Planner- 2003 Available online http://web.inflibnet.ac.in/info/mini.doc.

KJODE, (S) & DHAR, (U) Library services and functions in changing environment - An overview". *Indian Journal of Information, Library and Society, 15*(1&2), 2002. 24-29.

MANJINATHA (K), PAI (R D), and MATHEW (S K) Impact of Technology on quality of services in technical and management libraries in Karnataka, 2007. Manipal, T.A.Pai Management Institute.

MISHRA (K) Management education tyranny of the status quo: Challenges and opportunities for management librarians in the new millennium. In: Gaur, Ramesh, & Goyal (Eds.), 2001. *Proceedings of the 2nd National Convention of Management Libraries Network (MANLIBNET)* (pp. 16-17).

NYAMBPGA (C M) and KEMPARAJU (T D). Information technology in university libraries in Karnataka. *Information Development*, 18(4) 2002, p.257-265.

PARASURAMAN (A), ZEITHAML (V A) and BERRY (L L). SERVQUAL: A multiple item scale for measuring consumer perceptions of service quality. *Journal of Retailing,* 64(1), 1988. p12-40.

PARASURAMAN (A), ZEITHAML (V A) and BERRY (L L). *Delivering quality service: Balancing customer's perceptions and expectations*, 1990. New York: The Free Press.

RAMANA (P V). *Information technology applications in libraries*, New Delhi: Ess Ess Publications, 2004.

SAHU, (A K). Perceptions of service quality in an Academic library: a case study. *Journal of Services Research*, 7 (1), 2006. p.187-204.

STOREY (C) The impact of information technology on management and organization: the case of Hong Kong Polytechnic University Library. *Library Management*, 16(2) 1995, p.22-33

VENKATARAMAN (P) and RAO, (Chandrasekhar). Impact of information technology on library operations and services. In B. Satyanarayana et al (Eds.). *Information technology: issues and trends*, v.1. New Delhi: Cosmo Publication, 1998, p.184-193.