CHAPTER-6: CONCLUSION AND FUTURE SCOPE OF THE STUDY

6.1 Introduction

This analysis of the present work on the efficiency of Total Quality Management in services of selected IITs libraries (IIT Delhi, Roorkee and Kanpur) has been presented in the previous chapter on the basis of primary data collected through questionnaire and supplemented with the observations. This chapter details out the summary of findings, suggestions, conclusion and future scope of this study.

6.2 Summary of findings

The findings of the study are as follows:

6.2.1. Findings of the Library Professionals

Status of automation

- All three selected libraries are using LibSys software operating system. This software is based on Linux / Windows and database is based on SQL Server.

Software support services

- IIT Delhi only head reported satisfaction, while the other two libraries have reported that vendor are not supportive in delivering the desired services. The staff of other two libraries, namely IIT Roorkee and IIT Kanpur has complained that after paying the annual maintenance charges, representative from the LibSys do not turn up promptly in solving their problems. This may be fact that Roorkee and Kanpur cities are located so far away from the location of LibSys headquarter.
- However, now online support has been started.

Upgrade version of LibSys software

- IIT Delhi reported that LS Premia version of LibSys has very friendly function.
IIT Roorkee is using LIS Smart version of LibSys software.

6.2.2 Findings of the Library Users

- A total of 1805 questionnaires comprising of IIT Delhi- 660, IIT Kanpur-590 and IIT Roorkee-555 were respectively distributed among the library users are IIT.
- Out of total administered questionnaires 606 from IIT Delhi, 566 from IIT Kanpur and 503 questionnaires from IIT Roorkee were received.
- But 32 questionnaires from IIT Delhi, 10 from IIT Kanpur and 21 from IIT Roorkee were rejected due to incomplete responses. Thus, finally presented data analysis is based on the 574 questionnaires from IIT Delhi, 556 from IIT Kanpur and 482 from IIT Roorkee.

Frequency of use

- It is observed that more than 90% of the users visit the library in IIT Roorkee either daily or weekly or fortnightly. The corresponding figures are 85% for both the selected IIT Delhi and IIT Kanpur libraries.

Purpose of Use

- In one of the major purposes namely learning by the user community, IIT Delhi (47.21%) comes on the top followed by IIT Kanpur (39.56%) and IIT Roorkee (30.40%). As far as research is concerned, IIT Kanpur (21.58%) is on top followed by IIT Delhi (14.98%) and IIT Roorkee (7.67%).
- In preparation for assignments, IIT Roorkee (13.96%) is on the top followed by IIT Delhi (6.62%) and IIT Kanpur (4.85%).
- In preparation of class room teaching IIT Kanpur (9.17%) is on the top followed by IIT Delhi (5.92%) and IIT Roorkee (2.69%).
- In internet surfing for databases, IIT Kanpur (17.45%) is on the top followed by IIT Delhi (16.02%) and IIT Roorkee (14.52%).
- For reading newspapers and magazines, IIT Roorkee (3.11 %) is on the top followed by IIT Delhi (1.56%) and IIT Roorkee (3%).
Library Software

- It is observed that 90% users of IIT Delhi are aware of library software as compared to the IIT Kanpur and IIT Roorkee.

Level of satisfaction

- The uses of IIT Kanpur (64.39%) are strongly agreed about Library services satisfaction in comparison to IIT Delhi (45.99%) and IIT Roorkee (51.86%) users’ satisfaction.

OPAC Vs Card catalogue

- IIT Delhi (83.27%) is on the Top in the use of OPAC for searching and retrieving the information from their library. IIT Roorkee (13.69%) is using both methods (OPAC & Manual).

Search strategy in OPAC

- IIT Delhi (68.81%) is on the top for searching simple search from OPAC as compared to the IIT Kanpur (67.08%) and IIT Roorkee (68.46%).
- IIT Kanpur uses more advance search in OPAC (22.12%) as compared to IIT Delhi (21.77%) and IIT Roorkee (9.33%).

Search priority in simple and advance search mode

- In first priority of searching that is author wise among the users in IIT Delhi (33.44%) is on the top followed by the IIT Kanpur (28.95%) and IIT Roorkee (22.40%).
- In the second priority of searching that is Boolean search, IIT Kanpur (38.31%), is on the top in comparison to IIT Delhi (28.04%) and IIT Roorkee (17.42%).
- In third priority of searching that is title wise, IIT Roorkee (29.87%) is on the top in comparison to IIT Delhi (24.74%) and IIT Kanpur (17.27%).

However, it may be noted that the OPAC of all the selected Libraries provide some other advanced search facilities such as, field specific search, year of publication etc. But it is observed that these search options are very rarely used by the users of
selected libraries.

**Use of OPAC for checking the status of the items**
- 83.27% users of IIT Kanpur are using OPAC for checking the status of items as compared to IIT Delhi (81.71%) and IIT Roorkee (62.44%).

**Use of OPAC for Loaned items**
- Highest number of users (83.63%) using OPAC for loaned items are from IIT Kanpur followed by the IIT Delhi (75.78%) and IIT Roorkee (51.65%).

**Whether interface for OPAC is user friendly**
- The result shows that though many users fall under “strongly agree” and “strongly disagree”, IIT Kanpur is at top (61.13%) as compared to IIT Delhi (58.4%) and IIT Roorkee (23.65%) when it comes to the users agreeing using OPAC for loaned items.

**Overall status of retrieval system**
- IIT Roorkee (27.38%), is on the top for overall system of retrieval system in their library.
- IIT Delhi (42.86%) members stated that the retrieval system of their library is very good.
- IIT Kanpur (14.21%) members stated that the retrieval system of their library is average.

**Behavior of library staff**
- The performance of the library staff rated by the users is either excellent, or good or very good. But this tendency is seen exceptional in all the three selected libraries. 90% of the respondents have shown their satisfaction with the behavior of library staff.

**Satisfaction with the overall services of library**
Selected libraries have shown their satisfaction with the library services. IIT Roorkee is on top in comparison to IIT Delhi and IIT Kanpur libraries.

A large number of students among the students committee have also suggested that printing facility should also be made available in order to get print out for the search results. So, libraries may attach at least one printer on OPAC terminal.

6.3 Testing of Hypotheses formulated

The set of hypothesis formulated are also tested for their verification using analysis of the data from various angles. The results are given below:

6.3.1 There is a considerable difference in the awareness of library software among the users of IITs

The effective and maximum utilization of library software is directly proportional to the knowledge of users with them. In this background, it is revealed from table-4 that 90.59% users in IIT Delhi and 88.48% users in IIT Kanpur replied that they are aware of library software packages. On contrary to IIT Delhi and Kanpur, the number of users (80.29%) who are aware of library software is less in IIT Roorkee. It is noted that there is a significant difference, which means the awareness of library software is higher among the users of IIT Delhi and Kanpur than the users of IIT Roorkee.

Thus the hypothesis is proved correct.

6.3.2 The usage of OPAC is much higher in the libraries of IIT Delhi and IIT Kanpur than in the library of IIT Roorkee, as IIT, Delhi and IIT, Kanpur are the old ones

The OPAC is considered as the gateway of knowledge. Thus, the maximum and effective usage of OPAC means the maximum utilization of library resources. In this context, it is revealed from the table-7 that the majority of users in IIT Delhi (83.27%) followed by IIT Kanpur (82.55%) are using OPAC for search and retrieval purposes. On the other hand, this number is less in IIT Roorkee, where (58.29%) users search and retrieve the resources of their interest via OPAC. In this way, a significant difference in the usage of OPAC was found among the users of IIT Delhi, IIT Kanpur and IIT Roorkee.
Thus the hypothesis is proved correct.

6.3.3 The library users in IIT Kanpur library are well-versed with the advanced search techniques in OPAC because IIT Kanpur is supposed to be ahead of computer technology, than the users of IIT Delhi and IIT Roorkee

With reference to the usage of advanced search techniques in OPAC, it is noted from the table-7 that 21.77% users in IIT Delhi while 22.12% in IIT Kanpur use advanced search facility in OPAC. In comparison, a moderately low percentage of 9.33% users in IIT Roorkee are using advanced search techniques in OPAC. The findings therefore, clearly reveal that the percentage of users using advanced search techniques in OPAC is higher in both the IIT Delhi and IIT Kanpur than in IIT Roorkee.

In addition to the findings of table-7 and table-8 also reveal that a significant percentage of 46.61% users in IIT Kanpur and 34.01% users in IIT Delhi use advanced search techniques comprising of Boolean search, phrase search and truncated search facilities in OPAC. In comparison to IIT Delhi and IIT Kanpur, only 20.95% users in IIT Roorkee are using advanced search facility of OPAC. It is therefore, clear from the results that the usage of advanced search techniques in OPAC is higher among the users of two of the selected IIT Delhi and IIT Kanpur than among the users of IIT Roorkee.

Thus the hypothesis is proved correct.

6.3.4 The library staff in IIT Delhi is more efficient and equipped in handling the software than their counterparts in the libraries of IIT Roorkee and Kanpur

The expertise of library staff is the prior consideration of any effective automated library system. In this backdrop, it is shown from the findings of checklist-4 namely serials control module, that the library staff of IIT Roorkee requires another level of training for making use of the available features of serials control module in Libsys software. In comparison the staff of the IIT Delhi and IIT Kanpur libraries through different training courses and workshops on automation has gained substantial competence in efficient management of library software for its maximum utilization.

Thus the hypothesis is proved correct.
6.3.5 All the selected IITs libraries are using all the modules that are available in library software respectively

Undoubtedly, the automated library systems have dramatically changed the users approach to access and retrieve the information. However, in most of the Indian libraries, manual systems are still in practice. In this direction, the IIT libraries till date have not used the Article Indexing module available in LibSys software. It means all modules of the software are not being used in any of the library.

Thus the hypothesis is not proved correct.

6.3.6 The user satisfaction level with respect to the overall services of automated library system is higher in IIT Delhi than in IIT Roorkee and Kanpur

The overall effectiveness of any automated library system is primarily determined by the overall satisfaction of users with the services provided by it. In this backdrop, the findings of table-14 show that 85.94% users in IIT Delhi and 86.47% in IIT Kanpur have revealed that they are either strongly satisfied or satisfied with the overall services provided by automated library system of their library. On Contrary to IIT Delhi and IIIT Kanpur, the automated library system of IIT Roorkee has taken lead as 90.66% users are either strongly satisfied or satisfied with the services rendered by it.

Thus the hypothesis is not proved correct.

6.3.7 There is a requirement to provide additional training to the staff of libraries by the software experts for efficacious use of the modules of library software

The effective and maximum utilization of library software requires in-depth training of all modules available in any library management system. In this respect, several findings of present study have suggested that the library staff in all the selected libraries requires more in-depth training from vendors to use all the available features of all the modules of their respective library software.

Thus the hypothesis is proved correct.

6.4 Suggestions

On the basis of findings of the study undertaken, the following suggestions are listed for the selected libraries in particular and for other libraries in general in order to
successfully implement automation project.

- Central Library, IIT Delhi is using RFID Technology for self Check-out and Check-in. It is also suggested to both the selected Mahatma Gandhi Central Library IIT Roorkee and IIT Kanpur libraries to modernize their issue and return system. However, recently, IIT Roorkee has started RFID.
- The library authority should conduct the orientation programme for the library users in understanding the library classification. Many users are not aware of the library classification. This training programme will be useful for users to retrieve the document in the library on the basis of subject classification.
- IIT libraries authority should make the necessary provisions to attend the TQM programmes for all the library professionals that is useful to execute the library function effectively.
- It is also suggested that more number of OPAC terminals are needed in IIT Kanpur and IIT Roorkee.
- A help desk should be procured for the efficient use of OPAC. Further, the selected IIT libraries should also make use of web OPAC module available in LibSys software.
- Like IIT Delhi, IIT Kanpur and IIT Roorkee should also become member of OCLC. This will ease the burden of cataloguing.
- Reference collection should be improved because most of the research scholars and faculty members utilize the reference books frequently.
- Although, LibSys software used by the selected libraries provides an option of online reference service, which is a common feature of most of the American and European libraries, but this service is not in practice in the select libraries. In this regard, efforts need to be taken to provide the reference service to users via internet as per their requirement.

Last but not least, all the selected libraries should be provided with enough staff for rendering quality service to users in the IIT libraries.
6.5 Scope for Further Research

- The present study may further be elaborated for all of the IITs' libraries of the country.
- Further, a similar study may be undertaken for IIMs (Indian Institute of Management) which carry the same reputation in India as that of IITs.

6.6 Conclusion

It is observed that the technology has had and will perhaps continue to have a dramatic impact on library operations and services. It is the main force for changing the core work culture of library situation. As the libraries are to satisfy the expectations of their end users to sustain their goal, objective and existence in present techno-oriented world, the trends of technology will certainly find their way into the large academic libraries.

The mission of central libraries of IITs, regardless of how it is stated, is to support the user community in providing them with the pinpointed and exhaustive information whenever they can. The present study reveals the performance of quality management and user services of selected central libraries of IIT Delhi, IIT Kanpur and IIT Roorkee in India,

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