CHAPTER-7

VALIDITY OF THE FORMULATED HYPOTHESIS, FINDINGS AND SUGGESTIONS

In this chapter, results on the validity of the formulated hypothesis, the summary of the findings of the study are given along with some suggestions from respondents and experts for successful implementation of library automation and digitization programmes to meet the needs of the present day library users. All the seven university libraries chosen for the study are using information technology tools to manage their affairs and are at various stages of achieving automation of their functionalities and digitization of their libraries' special holdings. They are acquiring adequate knowledge about the hardware and software options available in the market to meet their requirements. Though all the professional librarians know the utility and advantages of having standard software packages and hardware available for automation and database creation to facilitate the exchange of bibliographic record between libraries, yet they face many bottlenecks and constraints. It was ironical to note that the post of University Librarian was vacant in five of the seven university libraries in the region. Only PUL and KUL were having full fledged Librarians to guide their libraries. The appointment of University Librarians should be done at once in all the universities where that post falls vacant is the well considered view of all the experts in the field. As they have a major role in continuous monitoring the library and information retrieval activities of any university. The study showed that KUL had the largest number of (12,068) users followed by PUL with 11,000 users and JUL catered to the lowest number of users in the year 2007-08.

7.1 Hypotheses Testing Results

The results on the validity of the framed hypotheses those were framed as explanations to the questions listed in research methodology in the light of data collected from the university libraries of the northwest India are presented below:

(i) University libraries adopting automation and digitization of their services and functions are at various transitional stages due to existing dilemmas
and administrative bottlenecks resulting of their being still followers of some traditional systems.

The data presented in Chapter 5 shows that all the university libraries of the Northwest India are at various transitional stages on the path to achieve complete automation of their various operations and digitization of their contents. It is evident from Table 5.5 that PUL and JUL claimed them to be fully automated libraries, while in all other libraries many operations are still manually operated. However, the complete automation of circulation section and acquisition sections are yet to be completed even in JUL. Digitization of their holdings is still a distant dream. Hence the present data favours the hypothesis that though libraries of the region are moving fast to achieve the goal of completely computerized libraries, but some traditional systems are still being followed.

ii) Services of existing trained professionals are not being fully utilized towards automation and digitization.

The data collected from the respective libraries through personal visits shows that different practices are being followed in different libraries. In some university libraries, for example PUL, all works related to automation and digitization were being performed by the professional staffs of the university library who have received requisite training. But in some libraries, for example KUL (Table 5.8), the digitization work is got done from external agencies due to lack of infrastructure and trained manpower and other reasons. Moreover, due to lack of infrastructure, the services of the existing library professional staff are not fully utilized.

iii) Scarcity of resources results in resource sharing among libraries.

Resource sharing does not merely mean mutual sharing of information sources among libraries. It also means utilizing information resources of one library for generating services of another library. Despite scarcity of resources faced by libraries in the region, the data presented in Table 5.7 clearly shows that no resource sharing existed among university libraries of the region and no efforts have been taken in this context yet. However, interviews with the librarians reveal that library cooperation remained confined to inter-library loan from some libraries outside the region. The cost of
photocopying has to be born by the library users asking for the document. Internet and other local/national networks have facilitated resource sharing and thus validating the hypothesis.

iv) **Emergence of Library Consortia is a promising development for Resource sharing.** Library consortia are a strategic professional response to develop policies and strategies to ensure massive real time access to quality information in a cost-effective manner to set-off the effects of increased cost of library resources, growing universe of users and documents.

Consortium literally means temporary cooperation of several powers or large interests to for some common purpose. Library consortium is a group of libraries that agree to pool their resources by allowing the user of each institution some type of access to resources of all other institutions. It is a community of value creating entities generating value through an aggregation of library units within and across organizations. Basically consortia have been created for acquisition and sharing use of e-journals. It is possible for the users of participating libraries to access and/or download the required materials remotely. This facility is being provided by the libraries in the region through internet linking with national networks of UGC/INFLIBNET/INFONET/INDEST (Table 5.7).

v) **The potentialities of the available software modules have not been fully exploited by library and information scientists.**

Since most of the libraries were still to achieve complete automation of their services, this hypothesis was premature for any validation. Moreover, infrastructure was still a handicap and libraries needed more grants to build infrastructure. Information given in Table 5.5 on the question also validates this hypothesis that the potentialities of the available software modules in different university libraries have not been fully exploited by library and information scientists.

vi) **Due to lack of clear policies and resources, universities do not encourage appropriate in-service-training in the field of automation and digitization to library professional staff.**
The data presented in Chapter 5 show that not all the members of professional staff are fully conversant with the existing modules and software available for library automation. Moreover, only younger members of the professional staff are being sent for training and hence all the members of the professional staff are yet to get adequate training of the various automation related protocols. The digitization is specialized job and hence needs special training and no professional staff member in any of university library has received training in this. However, PUL has employed an Archivist who had special training in digitization work for the digitization of its specialized holdings. Data presented in Table 5.9 and Figure 5.1 clearly point out that lack of clear policies, resource crunch and no clear policies for in-service training are major constraints in library automation and digitization.

vii) Due to internet connections provided to the faculty members in their rooms or respective departments, fewer faculty members may be found at any given time during the day in the university library making use of services provided than the other categories of users.

It was found during the visits to different university libraries for data collection that on any given day, not many teachers were found either in the book-stack areas or reading halls and consequently their number as sampled users is also low as given in Table 5.1. The reasons given by some of these faculty member respondents were that as internet facility is available in their respective departments; many teachers do not make use of the facilities available in the main university library. The results of the present study favour the above hypothesis. From above it is suggested that user services being provided in the main university libraries should be more oriented towards students/research scholars.

7.2 Findings

1. All the libraries have their website except Himachal Pradesh University and the latter also has the lowest number of professional staff. Separate budgetary provision for automation and digitization exists in three university libraries alone: Punjabi University, Guru Nanak Dev University and Jammu University. However, in the year 2008, Panjab University got special one time grant of
Rupees 1.75 crore for the implementation of Radio Frequency Identification (RFID) Technology. (Table 5.1)

2. All the seven libraries surveyed have computer servers and computer clients. KUL has the highest number of computer servers and computer clients in the region followed by PUL and JUL. (Table 5.4)

3. Printers, Scanners, and Barcode Scanner are available in all libraries except HPUL. Only three libraries have the digital camera out of seven libraries: PUL, PBIUL, and GNDU. Three libraries have LCD Projector: PUL, JUL, and MDUL. Campus LAN facility is available in six libraries, as HPUL does not have these facilities. Network facility is available in all the seven libraries, but RFID has been implemented only in two libraries: PUL and JUL. (Table 5.4)

4. Library automation was started earliest in PBIUL in the year 1992 and last in JUL in the year 2003. (Table 5.5)

5. All the libraries are using library automation packages developed by external agencies or organizations except the GNDU. GNDU is using the locally developed software. Most of the libraries use the LIBSYS package of LIBSYS Corporation for automation. It is a commercial software package. Panjab University Library is presently using "SLIM 21" library automation software. (Table 5.6)

6. Regarding the operating systems, most of the libraries are using WINDOWS (five libraries) followed by LINUX (two libraries). Software performance has been scored as ‘excellent’ by the Professional librarians of Panjab University Library, Guru Nanak Dev University, Kurukshetra University Library and good by those of Punjabi University Library, Jammu University Library and Maharshi Dayanand University, Rohtak. Himachal Pardesh University Library Staff adjudged their software’s performance as an average. LIBSYS software is totally integrated with the libraries’ systems where ever employed than the CDS/ISIS software. (Table 5.6)

7. Panjab University and other six libraries of North-West Region are providing the Document Delivery Service through DELNET. All University libraries of the region provide internet and e-mail service to its users. VSAT type of internet has been used by the most libraries. Terrestrial Leased Line internet connectivity under the UGC-Infonet Programme is available in PUL, MDUL
and KUL. Only HPUL is providing the SCPC type of internet with bandwidth of 512 kbps. All University libraries provide E-journal accessibility. Only three University libraries provide more than 50 terminals for internet use. Under the UGC-Infonet Consortium, all University libraries provide online information services. All seven University libraries are connected with DELNET Library network and six libraries provide access to OPAC, WEB OPAC by for libraries. PUL provides document delivery service. Out of seven University libraries of North-West Region, PUL is the only library which was selected for the document delivery centre by INFLIBNET. (Table 5.7)

8. The results revealed that only three University libraries: PUL, GNDU and KUL have started the digitization of the manuscripts and rare books. KU Library has the maximum number of manuscripts i.e. 11,599. Digitization of the manuscripts has been done by the Nank Shahi Trust for the KUL and given to KUL as CD-ROM's. It has 3.6% of its manuscripts in digital form. Panjab University has done the digitization of 40% of its manuscripts. Only two libraries: GNDU, KUL are providing the access of these digitized manuscripts; the ‘interim cost’ is borne by the library. (Table 5.8)

9. Lack of official policy on automation and inadequate financial resources are the major constraints faced by the libraries. The other major constraints faced by them included non-availability of IT trained personnel. However, Punjabi University Library has given lower priority to some of the above mentioned constraints. For it, the major constraints were the non-availability of consultancy services and IT trained personnel. (Table 5.9)

10. The studies showed that majority of respondent users were not fully informed regarding differences between fully and partially automated libraries. (Table 6.8)

11. The majority of the respondents (69.6%) preferred both manual and online search access approaches for seeking information. (Table 6.9)

12. The majority of the users (89.3%) were of the view that online approach was the best to save their time. (Table 6.10)

13. The study showed that still majority of respondents (82.6%) from the university libraries used books as an information resource and for that purpose they visited the libraries. (Table 6.11)
14. The other most used library resources included reference books (62.4%) and periodicals (40.4%). (Tables 6.12 and 6.13)

15. CD-ROMS have not gained popularity with readers yet. Only 14.6% of the respondents visited university libraries for using CD-ROMS. One of the reasons may be that they are not easily accessible and their number in different university libraries is yet small. (Table 6.14)

16. The study showed that the majority of the respondents (65.2%) also used internet as an information resource. The approach was similar among respondents of all the university libraries except those of Jammu and Patiala where relatively more respondents gave negative response to the use of internet facility. (Table 6.15)

17. The results showed that only 39.4% respondents used online information resources. At Panjab University Library, the majority of the respondents (72%) used online resources; while at Punjabi University Library, the number of respondents using online resources was the lowest. (Table 6.16)

18. It was found that only 34.5% of the respondents used E-journals. PUL respondents were the highest users of E-journals and PBIUL respondents were the lowest users. (Table 6.17)

19. The study showed that circulation services (52.8%) and reference services (51.9%) are very popular with the respondents as compared with abstracting (15.2%) and indexing services (8.7%); the reasons are that majority of respondents visiting university libraries are undergraduate and postgraduate students as compared to lower number of research scholars and faculty members. (Tables 6.18, 6.19, 6.20, 6.21)

20. The study also shows that majority of users coming to university libraries do not come for using e-mail services as in the present study only 28.6% respondents used e-mail services. (Table 6.24)

21. As compared to lower number of e-mail users, the number of internet users was large (60.6%). This shows that number of serious online library resource users were much more than e-mail users. (Table 6.25)

22. The study shows that 90.7% respondents reported that they utilized the database services available at their university libraries. There was no response to this question by 9% respondents and only 0.3% respondents said that they did not make use of this service. (Table 6.26)
23. The results show that only 27% respondents used reprographic services of the university libraries. The total percentage of respondent users of this service is relatively low considering the present scenario. The highest proportion (60.5%) of user respondents of this service was from MDUL, where the number of users was higher than nonusers. The lowest number was noted at PUL Chandigarh. (Table 6.27)

24. The study shows that 63% respondents used online database services available at the university libraries. The highest percentage of respondents of such users was from PUL where 82% of the total respondents used these services and lowest percentage was noted at HPUL where 18% respondents used this service. (Table 6.28)

25. The study shows that 23.3% respondents used CD-ROM Database Services at the university libraries. The highest proportion (48.8%) was noted from MDUL Rohtak and lowest at PBIUL Patiala. (Table 6.29)

26. The study shows that 23.3% respondents used the INFLIBNET database which was available at their respective libraries. The highest proportion (58.5%) was noted at MDUL Rohtak and lowest (16.4%) at JUL. (Table 6.30)

27. The study shows that only 6.8% respondents used the Multimedia database service. The highest proportion (17%) was noted at GNDUL and lowest (0%) at PBIUL. (Table 6.31)

28. The study shows that 21.4% respondents used reference database service. The highest proportion (34%) was noted at PUL and the lowest frequency (7.3%) was noted at MDUL. (Table 6.32)

29. The study shows that 23.3% respondents used the Internal Record database service. The highest proportion (47.2%) of such users was noted at PBIUL and lowest (4.9%) at MDUL. (Table 6.33)

30. It was found that 48.8% of the respondents were consulting e-journals. The proportion of respondents consulting e-journals was highest in PUL followed closely by KUL. (Table 6.34)

31. The study shows that majority of the respondents (91.7%) who were nonusers of E-Journals at present expressed the intent of using these in future. Only 8.3% nonuser respondents showed no interest in E-Journals even in future. (Table 6.35)
32. The study reveals that the majority (60.9%) of the respondents who expressed their intent of using E-Journals in future replied that no training was given to them for using E-Journals. However, 39% of such respondents said that they were given training to use E-Journals by their library. (Table 6.36)

33. The study shows that the majority (86.8%) of the respondents who expressed their intent of using E-Journals in future replied that training was important for using E-Journals. The response of such respondents from different university libraries was similar. (Table 6.37)

34. The study shows that 82 (53.9%) out of 152 respondents expressed their satisfaction with the infrastructure facilities available in their respective libraries for E-Journals. The highest percentage (73%) of the satisfied respondents was from KUL and lowest percentage (6.7%) was from HPUL. (Table 6.38)

35. The study shows that 89 (58.6%) of the 152 respondents who were using E-journals were of the view that E-Journals would replace the print journals in future; while the rest of these respondents (41.4%) replied in negative. The highest number of subscribers (78.4%) of the former view was from KUL. (Table 6.39)

36. The study shows that maximum number of the respondents (77.6%) who were using E-journals was of the view that they preferred both print and E-Journals. (Table 6.40)

37. The study shows that 93.4% of the respondents who used E-Journals were using these for their research purpose. In fact, in all the universities, E-Journals were being used for their research work. At KUL, 27% respondents were using E-Journals for other than research work. (Table 6.41)

38. The study shows that 44% of the E-Journal users were using these daily, while another 30.7% were weekly users and another 9.33% were irregular users. (Table 6.42)

39. The study shows that all the universities provided internet services to the users(Table 6.43) these services where being provided free of cost except HPUL and PBIUL were providing internet service free of cost. HPUL and PBIUL university libraries were charging Rs. 15 and 10 per hour respectively for the internet service. (Table 6.44)
40. It was noted from the study that 55.3% respondents expressed their satisfaction for the internet services provided at their respective libraries. The highest percentage (76%) of satisfied respondent users was from the PUL and lowest (34%) from HPUL and GNDUL. (Table 6.45)

41. The study reveals that 49.4% respondents were using Yahoo Search Engine. At PUL and KUL, the number of yahoo search engine users was higher than other university libraries. (Table 6.46)

42. It was found that only 20.5% respondents were using Rediff Search Engine. The number of Rediff users was highest (34%) at MDUL and lowest at PUL (8%). (Table 6.47)

43. The study shows that Google is very popular search engine among users as 81.7% respondents were using it. The highest frequency of Google users was noted at PUL (92%) and lowest at HPUL (64%). Though the latter frequency is lowest, yet the majority of respondents there too were using Google. (Table 6.48)

44. The study revealed that only 7.5% respondents were using Altavista search engine. The highest frequency of such user respondents was seen at JUL (10.9%) and lowest at KUL (0.4%). (Table 6.49)

45. The results revealed that only 5% respondents were using India Times search engine. The highest frequency was noted at MDUL (14.7%) and lowest at PBIUL (0%). (Table 6.50). Some respondents also use other types of search engines. (Table 6.51)

46. The study shows that overwhelming majority of the respondents (94.7%) sought help of the library professional staff for their library needs. (Table 6.52)

47. The data when analyzed for the type of the help taken by the respondents from the library staff, the results show that 82.6% respondents took the help to locate the books. The highest seekers of such help were from JUL (94.5%) and GNDUL (92.7%) and the lowest from KUL (63.3%). (Table 6.53)

48. It was noted that 47.8% respondents sought help of the library staff to locate current periodicals. The highest number of such help seekers were from MDUL (63.4%) and lowest from KUL (24.5%). (Table 6.54)

49. It was found that 23.9% respondents sought the help of the library staff to locate bound volumes of the periodicals. The highest number of such help
seekers were from PBIUL (41.7%) and lowest from KUL (10.2%). (Table 6.55)

50. The results revealed that 15.5% respondents sought the help of the library staff to find facts figures. The highest number of such help seekers was from MDUL & GNDUL (26.8%) and lowest from PBIUL (6.1%). (Table 6.56)

51. The data revealed that 34.8% respondents took the help of the library staff to search information on the net. The number of such help seeking respondents was highest at JUL (49.1%) and lowest at PBIUL (11.1%). (Table 6.57). Some respondent sought the help of the library staff for various other miscellaneous services(Table 6.58).

52. The results revealed that 42.2% respondents were fully satisfied, 51.9% were moderately satisfied and only 5% were unsatisfied with the help provided by the library staff. The highest number of fully satisfied respondents was from MDUL (53.7%). The table shows that on the whole, respondents were satisfied with the help provided by the library staff. (Table 6.59)

53. The study showed that 43.8% respondents had favourable inclination towards the services provided by the libraries. Another 43% respondents were indifferent to the question. Only 1.6% respondents showed their dissatisfaction. (Table 6.60)

54. The results showed that 63% respondents were satisfied and 36.6% were unsatisfied with the library collections and resources. The highest frequency of satisfied respondents was noted at MDUL (70.7%) and PUL (70%) closely followed by KUL (69.4%) and JUL (69%). The number of unsatisfied respondents was higher than satisfied respondents at HPUL (58%). (Table 6.61)

55. The data revealed that 65.2% respondents were of the view that more books should be purchased by their libraries to improve their services. The frequency of respondents giving this suggestion was highest at JUL (83.6%) followed closely by HPUL (80%). The lowest percentage of respondents gave this suggestion at PUL (48%). So there were regional variations in the needs of the respondents. (Table 6.62)

56. The majority of respondents (72.7%) were not in favour of having more library staff for bringing improvement in library services. However at JUL, majority of respondents (52.7%) were in favour of having more staff for the
library to improve the services of that library. On the contrary 89.8% and 88% respondents were against in supporting the contention of having more library staff for improving services in the libraries of KUL and PUL respectively. The regional differences and significant association between libraries for this variable were also noted. (Table 6.63)

57. The results revealed that 50.9% respondents did not favour the suggestion of having more periodicals and magazines for improving the library services. However, shortage of these resources were felt at MDUL (73.2%) and HPUL (70%), where majority of respondents favoured this suggestion. The regional differences and significant association between libraries for this variable were noted. (Table 6.64)

58. The majority of respondents (56.8%) wanted that more computers should be purchased for internet surfing and consulting E-Journals. However, there were regional differences in this response as majority of respondents at JUL (63.6%) and KUL (61.2%) were not in favour of this suggestion. But at PUL and HPUL, 68% of respondents favoured the former suggestion. (Table 6.65)

59. The majority of respondents (68.9%) were not favour of having more computers for OPAC. The percentage of such view holders was very high at PBIUL (91.7%) and JUL (85.5%). (Table 6.66)

7.3 Suggestions based on interviews for Further Strengthening Library Services and Automation of University Libraries in Northwest India

1. Hardware and software should be acquired as per the latest configurations.
2. For the efficient and successful implementation, library professional should be given adequate training and senior professionals should visit those libraries which are fully computerized.
3. Easy purchase procedures should be adopted for acquisition of hardware and software.
4. Erratic power supply should be corrected by installing high capacity UPS and power generator.
5. UGC should timely release funds.
6. There should be resources sharing and networking among university libraries and affiliated colleges through Internet.

265
7. The facilities available in the university library should be fully notified to the students and other users through users’ education programme.
8. Adequate training should be provided to the users in using e-resources.
9. More online journals, books and other resources should be purchased or made available through resource sharing with other networks.
10. More computers should be purchased to meet the needs of users.
11. Wi-Fi facility should be provided to all the library users in the universities.
12. Majority of respondent users were not in favour of employing more staff for strengthening library services, but wanted better infrastructure and current technologies.
13. The university libraries should urgently realize the need of technology change rather than showing their inability to incorporate changes due to inadequate trained manpower, administrative bottlenecks, existing staff structure, inadequate resources and lack of action plan.
14. The study finds that there is no policy in place for the removal of hindrances in implementing library automation and digitization in a time-bound approach. There is need to evolve such a policy.