CHAPTER V

FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter summarizes the findings of the study, provides the conclusion and recommendations, and suggests directions for further research. The study was set out to examine the digital library information services in the selected college libraries in Chennai. A summary of findings is provided, in each case highlighting various observations and important variables are studied.

5.2 FINDINGS

5.2.1 General Information

- 700 structured questionnaires were distributed among fourteen
  50 questionnaires were randomly distributed to the respondents in each colleges including the faculty members (Assistant Professor, Associate Professor, Professor) and Students (UG, PG, M.Phil., and Ph.D.,). Of which, 566 (80.86 percent) filled responses received from the fourteen colleges, the response rate is 80.86 percent among the selected academic colleges in Chennai.
• That male dominated in number with 343 (60.60 percent) respondents while the rest is of female 223 (39.40 percent) respondents. Between the categories of the respondents, UG Students are major group with 192 (33.92 percent) respondents which is followed by 92 Assistant Professors (16.25 percent), 86 Associate Professors (15.19 percent) and 79 respondents (13.96 percent) in the PG Students.

• The respondents are having a research experience of 0-5 years (261) and 6-10 years (116), which is followd by 11-15 years of experience (76) and 16-20 years (75). Only a few (38) of the respondents are with research experience of 20 years and above. Between the categories of the respondents, a majority among the UG students (100.00 percent) and PG Students (60.76 percent) are having 0-5 years of experience, 88.00 and 80.85 percent of Ph.D. Students and M.Phil. Students are having research experience between 6-10 years, 55.81 percent of the Associate Professors are having research experience between 16-20 years and 55.43 percent of the Assistant Professors having research experience between 11.15 years. It is also interesting to note that 46.67 percent of the Professors are having research experience above 20 years.

• It revealed that a majority (28.80 percent) of the male respondents and female respondents (17.31 percent) are having experience between 0-5 years, which is followed by 8.30
percent of female respondents and 12.19 percent of the male
respondents are having research experience between 6 and 10
years. The same trend prevailed in terms of the research
experience of both the gender among the respondents among the
selected academic institutions in chennai.

5.3 PRODUCTIVITY

• The data revealed that a majority (69.26 percent) of the
respondents presented papers in National seminars and
conferences, while 32.51 percent of the respondents presented
papers in International seminars and conferences. There is high
difference between the categories of the respondents with regard
to the research papers presented in National and International
academic events.

• The respondents have registered membership in International
professional societies. It is vice versa, in case of research projects
awarded, as 14.87 percent of the male respondents awarded
research projects funded by national and International agencies
and only 14.35 percent of female respondents got awarded
research projects.

• The trend of use of electronic information sources among the
surveyed respondents found significant difference. A majority of
the respondents (86.22 percent) have used Wikipedia, which is
followed by Websites (74.56 percent) and blogs (70.85 percent)
by the respondents. Online Database and Social networks are used by 68.37 and 62.37 percents of respondents respectively. Between the categories, the same trend prevailed in terms of the use of online databases, websites, Wikipedia, social networks, and portals.

- The Gender wise distribution of data with regard to use of electronic information services found that a highest percentage of Male (87.76 percent) and Female (83.86 percent) preferred Wikipedia. The other e-resources usage between Male and Female respondents differed significantly more number of male preferred Websites (86.88 percent), Blogs (81.92 percent), while higher percent of female respondents preferred Websites (55.61 percent), Blogs (53.81 percent), Online Databases (54.71 percent). A less number of Female respondents preferred Subject Gateways (39.01 percent) and portals (37.22 percent).

### 5.4 INFORMATION NEEDS

- The Students differ with others in terms of information required for writing project proposals (64.58 percent), Factual and Statistical Information (57.30 percent) for UG Students, Information for preparing project proposals (96.00 percent) and writing project proposals (92.00 percent) for Ph.D. Students. Highest percentage of Assistant Professors, Associate Professors and Professors (100.00 percent) preferred information for writing
research articles. It is inferred that most of the respondents preferred information for writing research articles.

- The Gender wise distribution of information required revealed that a majority of the Female respondents required Information for writing research articles (86.55 percent), Preparing project proposal (85.20 percent) and Product Information (82.96 percent) Factual and Statistical Information (73.99 percent), while the Male respondents preferred information for writing articles (84.26 percent), Factual and Statistical information (80.17 percent), and Product Information (60.93 percent) when compared to other categories of Information required.

- The categories Assistant Professors are dominating in terms of access to research articles (97.83 percent) and e-journals (66.30 percent), while the Associate Professors are dominant in terms of access to research articles (96.51 percent), e-journals (83.72 percent), followed by the Professors who are dominant in terms of access to research articles (95.56 percent) and product profile (86.67 percent). It is inferred that Students are dominant in terms of accessing web-based resources such as research articles, e-books and e-journals.

- The Gender wise distribution of web resources access shows that Male respondents are dominant in access to Research Articles (85.42 percent), e-journals (73.18 percent), e-books (58.89 percent), Educational sites (56.27 percent) and Research reports
(53.93 percent). The Female respondents are dominant in access to e-books (83.86 percent), research articles (75.78 percent), e-journals (69.95 percent) educational sites and funding sites each 61.88 percent.

- It is found that the Springer link (33.21 percent) has the highest stake among the usage regularly between the categories of respondents, which is followed by Wiley Blackwell (24.38 percent), Annual Reviews (22.79 percent), Taylor & Francis (21.02 percent) and Royal Society of Chemistry (16.08 percent) and these are the full text science databases regularly used by the respondents.

- The present study found that JCCC (73.67 percent), Web of Science (63.78 percent) and Scifinder (53.71 percent) are the majorly used databases among the research scholar and Staff members of the selected College Libraries in Chennai. It is quite interesting to note that Web of Science and JCCC have been used by more than 60 and 70 percent of respondents respectively. It is an encouraging sign that the college libraries web based services are highly accessed by the stakeholders.

- The study analyzed the open access resources, particularly the scholarly information resources that are accessed by the respondents through the selected college library websites. It is evident from the majority of the respondents who not at all used
any of the open access databases of the scholarly journals and theses.

- Use of various major search engines among the respondents revealed that the surveyed respondents have been using Google while Yahoo is a preferred search engine by a first and second largest group of respondents (96.29 percent and 85.86 percent) which is followed by Rediffmail (74.55 percent), AltaVista (66.60 percent), and Hotmail (51.76 percent).

- The Gender wise distribution of usage of search engines shows that Male respondents are dominant in access to Google (97.08 percent), Yahoo (87.75 percent), Rediff (83.96 percent), AltaVista (56.56 percent) and Hotmail (46.94 percent). The Female respondents are also dominant in usage of Google (95.07 percent); Yahoo (82.96 percent), Rediff (60.09 percent) and AltaVista are in 82.06 percent.

- Studying the purpose of internet access among the end users communities has become significant in deciding the delivery of business and service products and also provides inputs to the internet and Information Technology enabled companies to cope with the frequent changes of consumer behavior. In this context, the present study aimed at identifying the purpose of accessing internet by the respondents among the surveyed selected college libraries in Chennai. It is revealed that a majority of the respondents are using internet for Education (65.72 percent) and
for Research (56.36 percent) which is followed by the purpose for Communication (45.58 percent) and Entertainment (39.58 percent).

- Awareness and familiarization of search strategies is very much imminent as the internet has become culture rather technology. It is evident from the study that only half of the surveyed respondents are adopting search strategies for internet and database access. It is found that 56.01 percent of the respondents have adopted Boolean Logic among the search strategies, which is followed by synonymous search (41.70 percent), and wild card search (25.79 percent).

- Gender wise distribution of search strategy shows that Female dominated within the group in terms of adopting Boolean logic as the search technique. While all other three search strategies such as wild card (28.70 percent), truncation (21.97 percent) and synonymous (47.98 percent) search were also dominated by the Female Students and Staff members.

- The frequency of accessing e-resources by the stake holders enable inputs for decision making in the selected college library towards developing e-infrastructure and electronic information services in the college environment. Accordingly, the present study has identified frequency of College library users in the studied environment. It is found that, a majority of them are
accessing e-resources daily (52.30 percent), which is followed by
weekly access (21.91 percent), monthly access (15.90 percent).

- The Staff and Students are using e-resources for different
purposes. Among them, the purposes of accessing research
literature (81.09 percent), followed by finding the relevant source
on their specialization (53.89 percent), and keeping up-to-date
subject information (41.52 percent) are mostly preferred by the
respondents.

- Gender wise distribution on purpose of accessing e-resources
revealed that Male are dominating in terms of accessing e-
reresources to access research literature (83.38 percent), Finding the
relevant information on area of specialization (47.23 percent) and
Publishing articles and books (37.23 percent). It is inferred that
the Male are dominating than Female in terms of frequency use
of e-resources.

- It is inferred that Students are spending more time on accessing
e-resources compared to the other category which is Staff
members.
5.5 LEVEL OF SATISFACTION OF WEB BASED LIBRARY SERVICES IN SELECTED COLLEGE LIBRARIES IN CHENNAI

- The researcher has assessed the use of various library and information services that are particularly rendered in the electronic and web media among the surveyed college library environment. This is very much significant to identify the type of web based library services including the access to web information search and delivery and also evaluates the extent of use of these information services by the end users in the surveyed environment which is one of the main objectives of the study.

- It could be found from the study that the five point scaling on the relevance and use of the services among the respondents gained momentum for article indexing, library network services, online OPAC services, internet access, online databases access as ‘good’ and ‘very good’ opined by the respondents.

- The respondents are satisfied in the digital library and e-learning support services such as e-journal access, e-learning facilities rated as Good. The remaining number of library users rated digital library services such as subject gateways, Audio Video Service, Library Portal Service, Subject Gateway Service, Institutional Repository, Digital Talking Library, Digital Library, mobile based services and institutional repository as ‘Fair’.
• It is found that the web services such as Face book access, bookmarking, webinars, library blogs, and twitter are rated as Fair among the surveyed users in their respective library environment. While a sizeable number of users rated the YouTube access facility as ‘Good’ and ‘Very Good’. The rest of the above mentioned web services existed among the surveyed libraries opined by only a few of the respondents as ‘Good’ and ‘Very Good’.

5.6 ACCESS TO THE LIBRARY WEB RESOURCES AND SERVICES THAT MADE AWARE ON E-RESOURCES ACCESS

• From the sources that are made aware of the use of e-resources among the Students and the Staff in the surveyed college libraries in Chennai, it is found that the library orientation programs (66.08 percent) and library websites (52.12 percent) are the major means to know and familiarize the access of e-resources, among the respondents, which is followed by help of the library professionals and fellow colleagues (42.93 percent and 32.33 percent) which enabled the use of e-resources in the surveyed environment.

• It is inferred that the selected college library environment is the major source to make aware and familiarize the access of scholarly information resources in electronic environment.
5.7 OPINION ON WEB BASED RESOURCES / E-RESOURCES

ACCESS BENEFIT OF WEB BASED ACCESS OVER SERVICES

- The benefits and outcomes of the web based access to library and information services are significant aspects in terms of enhancing the e-infrastructure. Accordingly the present study aimed at analyzing various benefits of e-resources access in the surveyed library environment. It is learnt from the analysis that a majority of the respondents revealed a range of benefits on access to scholarly information through the websites.

- The study also revealed that some of the respondents belong to Assistant Professors and Associate Professors category are more in numbers rated the benefits as easy to use, time saving and access to any time anywhere of the e-resources.

- E-resources access behaviour in terms of gender revealed that a larger group of Female respondents are more informative in accessing e-resources (78.03 percent) while Male respondents are higher within the group in terms of more informative (68.51 percent) and time saving (54.23 percent) towards accessing web based e-resources.

- It is revealed that connectivity problem (74.56 percent), Time Consuming (66.61 percent), Power Fluctuation/Failure (60.42 percent), Downloading speed (53.36 percent), as the
problems encountered by majority of the respondents, Difficult in finding relevant information (24.56 percent), Privacy problem (22.08 percent), Unavailability of Systems (20.85 percent) are also the problems faced by the respondents in accessing web based knowledge resources and services.

• Web resources access behaviour in terms of gender revealed that a larger group of Female respondents reported Connectivity Problem (82.96 percent) while Male respondents are higher within the group in terms of having Connectivity Problem (69.10 percent) and Time Consuming (58.60 percent) towards accessing web based e-resources.

5.8 OPINION ON OVERALL WEB BASED SERVICES FROM THE COLLEGE LIBRARIES

• The overall satisfaction among the respondents in surveyed selected college libraries varies between the categories and as to the five point ratification on the extent of web-resources. A Fair number of respondents felt Good (36.22 percent) and Fair (24.20 percent) in terms of the overall web based services from the selected college libraries. It is also important to note that 73 respondents felt the service as Poor (12.90 percent) and not at all (7.77 percent) satisfied.
• It is also inferred that more than two third of the respondents among the surveyed selected collegis were satisfied on web-based library services and web-resources access facility.

5.9 SUGGESTIONS OF THE STUDY

• Selected Colleges surveyed need to capture the opportunities such as NMEICT, EDUSAT, N-LIST of INFLIBNET and other programmes towards improving the information access and use.

• Social networking, Bookmarking sites and web technologies including mobile apps need to be integrated with the college library websites towards the future digital information services.

• Training for the library personnel, demonstrations, workshop for the users, particularly on social science databases have to be organized.

• It is suggested that the surveyed college libraries in Chennai, need to update the library websites for dynamic information display.

5.10 SUGGESTIONS OF THE FURTHER STUDY

• Assessment of study particularly in the digital and web environment among the end-users are to be consistently carried out in business environment.
Accordingly, service industry, particularly higher education institutions need to evaluate the application and use of Information and Communication Technology in order to enhance the quality and delivery of higher education.

A study on use of N-LIST resources among the colleges of Tamilnadu.

A study should be made on use of web based digital library services in the higher secondary schools of Chennai.

5.11 CONCLUSION

Information services among the selected academic institution in Chennai based colleges are encouraging and are at optimum use, though limitations such as Power Fluctuation and Failure, Band Width, Networking, Connectivity, Information Literacy and Consumption of Time towards accessing e-resources and web based library services, need to be addressed in order to enhance the exploitation of web environment. The study also observed that a significant difference existed between the respondents in terms of research experience and no significant difference among library users towards gender wise research experience, use of electronic sources of information, usage of search engines, frequency of accessing e-resources and time spent on accessing e-resources. As the web has emerged as an important mode of communication in all domains of human life, the same issue reflected in the college environments which are surveyed in the selected colleges in chennai.
The college libraries have enabled access to the major e-resources databases pertinent to Basic Sciences, Life Sciences, Humanities, Social Sciences and Technology to their user community as these resources were linked to their digital collection and websites. Use of major open access resources and Institutional Repository among the user community in the college environment prevailing in selected colleges ensured the digital based resources access by the libraries. Provision of resources, facilities and training to the library personnel in the college library, the technical and infrastructure assistance by national and international governments and integration of Information and Communication Technology in teaching learning progress together has enabled the scholarly information access at anytime, anywhere in the digital environment.

At the same time the bridge between the stakeholders towards using Information and Communication Technology for teaching, learning and research needs to be narrowed by extending the facilities and the initiatives to the other areas of the college and school library environments and even networking and facilitating scholarly resources through public library system.