CHAPTER VIII

CONCLUSIONS AND SUGGESTIONS

In the course of the present research study and the interpretations made in the preceding chapters, many interesting facts and features about open source software movement and open access movement have come to the fore. These facts and features not only reveal the development of open source software movement and open access movement as a whole, but also lay down the foundation for further research in these areas in future.

8.1. Conclusions: open source software movement

1. Open Source like open access is distribution of software with the source code and with the liberty to modify or redistribute the same to anyone.

2. Libraries are in high need of computer software to meet the expectations of the users. Open source provide them a variety of software developed by a number of organisations and individuals worldwide.

3. The philosophy of library and open source software is the same, i.e., to serve the community. Use of open source in libraries supports this philosophy largely.

4. Open source does not mean that it should be free of cost, one may charge for an open source software, however, he cannot restrict the purchase to distribute it freely to others or to modify it.

5. Open source operating systems and web servers have already captured the most of the servers in the world.

6. From the perspective of a library professional, open source software is playing the role of life saving medicine especially in developing countries.
7. Open source software is a successful alternative for any type of library and available for a wide range of operations applicable for a library from general, operating system (Linux), data processing software (Open Office) to specifics, i.e., library management system, digital library creation, web designing, e-learning, content management system, managing online serial or conference, etc.

8. Even when a library adopts open source software it may need Annual Maintenance Contract to maintain the system. Unlike proprietary software where only the developer manages it, here the advantage is that, the library has the option to choose from a number of vendors who offer to management various open source software. Some prominent vendors are Liblime, Equinox, ByWater, Lyrsys, etc.

9. In open source software user libraries have a number of choices to adopt or migrate to at any point of time. Good choices for library management software are Koha and Newgenlib; for Digital library software, DSpace, Greenstone and Eprints; for content management software Joomla, Drupal and Wordpress. These alternatives provide a huge range of choice from which libraries can select most prominent and promising software as per their needs. These alternatives also give them choice to migrate from one to another at a later point of time.

10. Open source software release their new upgraded version more frequently than proprietary software; also these upgraded versions of open source software are freely available to the users while in case of proprietary software users are required to pay even for the new versions of the software.

11. Open source operating systems have been proving themselves very safe in comparison to proprietary operating systems. We all know that the Linux versions of operating systems are more secure than Windows in terms of virus and malware attack.
12. Open source makes source code available to the world; the people around the world not only can use it, but modify it and improve the software to make it more competitive. It has already been accepted that all types of open source software are presenting very strong competition to commercial software.

13. Among available open source software, NewGenLib is found more suitable for library automation; while DSpace is good for creating digital libraries. These software are easy helpful and available with enough technical support to library professionals.

14. The open source software have very bright future as the market base of open source software is increasing very fast. Open source operating system and web servers are already in high use in comparison to proprietary systems. Open source SQL database is posing tough competition to proprietary software. Libraries are increasingly using one or the other open source software.

8.2. Conclusions: Open access movement

1. Information Technology has become an unavoidable element of today’s libraries and information centres. Open source software and open access resources are the tools and resources that provide a helping hand to the libraries having limited or no financial resources to use modern information technology.

2. The open access is associated with the scholarly publishing in the form of journal articles. The advocates of open access expect the free distribution of digital copies of these scholarly publications.

3. Since the publication of first scholarly journal, the prices of scholarly publications continue to increase sharply. Many of the publications become unaffordable even for big libraries.
4. Open access movement offered three fold solutions in the form of open access journals, self-archiving and institutional repositories. Researchers can opt for any of these ways to publish their scholarly writings.

5. The Open access movement was supported by a number of individuals, institutions and associations which reflected in the beginning of a number of open access journals.

6. Open access in not just a movement to encourage the barrier free access to scholarly publishing, but also to accelerate the research with easy access to research results. Such an effort thus avoids duplication of research that leads to saving and conserving the collective resources of humanity.

7. Open access provides nationally and globally a way to generate and encourage further research, education and training prospects.

8. If we see this movement from a different perspective, we can easily understand that open access movement has expanded the definition of ‘right to life’. The maximum journals available in open access are of health science. Hence, now people associated with health sciences can easily access research results in their subject area without any economic liability; something that was possible earlier only when their institutions subscribed to the same. They, now, not only can access that research result but also apply it to enhance their profession and render service to society.

9. The open access movement has given birth to the concept of cyber democracy where scholarly publishing is available for all and anyone can use it without prior permission of the author of the same just by fulfilling moral duty of acknowledging the author.

10. Open access movement has also been very supportive in the growth of knowledge economy by making knowledge and information available to wide number of people.
11. Open access does not violate the right of the author to be acknowledged. The researcher using earlier work has moral obligation to acknowledge the author whose research has been used in the study.

12. One of the major impacts of open access is that it omits or removes the barriers between university and society or research organisations and societies. Research work which earlier was accessible only to universities and research institutions that subscribed to it is now accessible through open access to anyone even outside these institutions.

13. Open access has made the scholarly writings available to a wide range of people such as entrepreneurs, consultants, social workers, journalists, policy makers, teachers in schools, people in business & industry and the public as a whole. Earlier maximum scholarly writings were available to only academicians and researcher who were able to access it through the subscription by their parent organisation. Use of scholarly writing by general public will surely enhance their understanding and social learning.

14. For the government funded research, open access is a way to get maximum utilisation and maximum return on the government funds by way of making it widely available, easily discoverable, accessible, retrievable and much more useful.

15. At this juncture, the notion of developed nation has changed. Now the country having maximum financial resources is not called developed nation but a country having maximum information is considered a developed nation. Open access is a wonderful way to increase the ‘knowledge capital’ of any country.

16. The open access advocates do not expect the authors who write for a living to allow open access to their work. However it expects a university researcher to allow to access his/her work through open access.
17. Open access and open source movement have been proving very successful in bridging the digital divide and the gap between the haves & the have nots, the developed & the developing and the rich & the poor; be it individuals or libraries.

18. Open access movement has forced the commercial publishers to respond positively to it by either turning few of their journals to open access instantly or after few months. Many publishers are running a number of open access journals along with their commercial journals. Moreover, many of them allow authors to submit the pre-print or post-print of their articles to the institutional repositories of their institutions.

19. The open access movement is showing its wide impact over scholarly publishing. A number of open access repositories and more than 10,000 journals in various languages are available to the world. A library is in a very good position to help in the growth of open access movement via open source software.

8.3. Suggestions

In the light of the findings, interpretations and conclusions of the present study, the researcher would like to present the following suggestions.

1. Libraries with no library management software in their libraries should automate their libraries using open source software. Open source software is not a challenge, it is a help that we can use, improve and forward to someone else. It has numerous benefits; it offers a very smooth library system without having to pay for the software. This would help not only in modernising the library and the information professional’s skills but would also help in the development of the software that is being used. NewGenLib is a very suitable open source library management software while DSpace is a considerably good open source digital
library software. However, if one does not wish to use these for any reason, they may opt for other open source software. The open source world has good alternatives to choose from.

2. Libraries that are already using library management software but due to some functional difficulties wish to migrate to something better, may also consider migrating to NewGenLib for library management and DSpace for managing their digital library. They can even modify and customize these to suit their needs.

3. More than 10,000 open access journals in various languages (about 5000 of them in English) are available covering all fields of human endeavour. Such open access scholarly publishing is a very good source for libraries to provide their users right information at the right time. A list of 5000 English journals categorised according to different subjects is presented in Appendix A of this report. All libraries must provide access to these journals to their users through library’s OPAC or website. More use of open access literature will lead to more research results being put up on open access and that will boost open access movement.

4. The libraries should encourage and start institutional repositories to make the research work of their institution available to the world. It would not only boost the open access movement but would also make the access to their research output easy to the world.

5. The funding organisations including government should make it compulsory for researchers to publish their research in open access journals only. It will not only make their research widely available, but will also save the funds which is used in subscribing to the journals again to access the research work of their researchers.
6. Authors of research papers should also understand that the research done by them is funded by public and they should have access to it easily without again paying for it.

7. If the institution is having enough research to publish a journal of any periodicity they must start an open access journal. There are a number of open source software to maintain such a journal online.

8. Today’s library services are influenced very much by information technology and a library professional must have sufficient knowledge of it. Use of open source software needs fairly good IT skills and it may prove very good for working closely with information technology. Many a time librarian needs to debug the problem himself that needs good understanding of technology.

9. Growth of open source software for libraries depends upon the response of library professionals. When libraries use open source software it helps in the growth of the open source movement in the library field. It requires collaborative efforts from all those who have the abilities to make this movement more effective.

10. Moreover library professionals should also help in the development of new open source software and improvement of the existing open source software. Although it is the software professionals who develop the codes, the library professionals by constantly using it can identify the bugs found in the software and find the ways to smoothen the workflow of the software and inform the same to the developers. This would help and guide the software professionals to come out with new and improved versions of the software.
11. The library professionals should follow and encourage the use of open source and open access licensing by providing their research in open access and submitting their software to the open source community, if they succeed in creating one.

12. In summation, open source and open access are two separate movements but for the libraries the combination of two can do a magic that perhaps even proprietary software cannot do for them. A library professional must make the optimum use of the both.

8.4. Future avenues for research

Although library professionals are slowly becoming aware of open source software but still there is a lot of scope for research in open source software and open access literature. Research in open access needs more efforts to make is practically applicable in small libraries; presently open access literature is understood only in big libraries. The possible research areas related to open access and open source software in the field of library and information science is enumerated below.

- Comparative study of open source and commercial software to make Open Source Software more effective.
- Practical implementation of open source software in libraries and laying out the resources required, problems faces both technical and human, expected minimum budget for automating a library, etc.
- Use of open source software to make the use of open access literature more effective in libraries.
- Best practices with open source software and open access literature.