CHAPTER - 6

FINDINGS, SUGGESTIONS AND CONCLUSION

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Findings, Suggestions And Conclusion

6.0 Introduction

The study has undertaken a descriptive survey of the Institutional Repository systems / staff / librarians both within India and abroad. Survey also covers users of Institutional Repository only in India. The survey was carried out using 2 different questionnaires prepared for the purpose of the study. The findings are supplemented based on the extensive literature search carried on different aspects of Open Access Movement, Open Access Journals and Digital Institutional Repositories. Apart from direct questions to system staff and users, an open end request was made to give their comments and suggestions about developments of Open Access Movement and Digital Institutional Repositories. The data collected was tabulated and the references drawn along with analysis have been given below for every table concerned.

The development of Digital Institutional Repository in the world is very encouraging as indicated by the Directory of Institutional Repositories (OPENDOAR) which lists more than 1000 Institutional Repositories in the world. Compared to other developing countries, India has made very good progress in terms of number of Institutional Repositories set up crossing the figure 27 to be a leader among the developing countries. However, the survey indicates that more than 40 Institutional Repositories have been set up in India although not made accessible through Internet.
One of the very general observation is that there seems to be some lacuna in continuous updating of documents added to the Institutional Repositories except 4-5 Institutional Repositories such as the one set up at Indian Institute of Science, Indian Institute of Astrophysics, Raman Research Institution and National Aerospace Laboratories. The most popular Open Source Institutional Repository Management software is DSpace followed by eprints. The detailed statistics of Indian Institutional Repositories other aspects such as - Open Access Repositories by Type, Operational Structures, Content type, Languages covered, subjects and other aspects have been given in the appropriate tables.

The major findings of the study have been grouped under the following headings:

6.1 Findings

6.1.1 Indian Library & Information Services

- It is satisfying to note that a good number of libraries have been automated covering most of the modules including acquisition, technical, circulation, serials management, OPAC and budget control. {Table 16(I), 17(I), 18(I)}.

- Among the library automation system used especially for housekeeping activities LIBSYS has been the most popular software. It is also interesting to note that a small portion (nearly 20%) has developed their
own in house software and a few others are using CDS/ISIS although it is
basically an information retrieval system. Probably those using CDS/ISIS
would have developed it further for taking care of housekeeping activities.
The other library system is not very significant. Most of the libraries have
created library database (OPAC) of print holdings and implemented
modules like circulation, serials management and acquisition of
documents. {Table 17(I), 18(I)}.

- The web enabled services provided has a big relevance to the modules
  available in the library automation system adopted and also incorporation
  of service component in the library website and adoption of specific
  systems for individual services. The access to webOPAC gets the top
  priority followed by acquisition list, gateway for giving access to e-journals,
  list of current journals of acquisition list. In good number of libraries
  traditional services dominate over web based services. Still ILL is
  provided with Xerox copies although many requesters use e-mail for
  sending the request probably due to non-availability of document scanners
  and the trained manpower. More or less the library automation has almost
  stabilized while there is increasing trend in starting web based information
  services. The development of IR is likely to play a major role in this
  regard. {Table 19(I)}.

- The IT infrastructure although not outstanding, slowly many organizations
  have started realizing its importance and have been providing IT facilities
including appropriate servers, Operating Software, access to Internet, Local Area Network and trained manpower. While IT infrastructure at institutions like IITs, CSIR and central universities have been satisfactory, the same is lacking in state and traditional universities, except few universities. {Table 15(I)}.

- It is satisfying to note that majority of the institutions responded for the survey have library budget of more than Rs. 40 Lakhs and more than 40,000 collection of documents. {Table 12(I), 13(I)}.

### 6.1.2 Awareness & Availability of IR

- All IR system staff responded are aware of the developments in Open Access Journals and Institutional Repositories. The response is obvious as questionnaires were sent to selective libraries, in India who already have IR or who plan to set up IR or at least are users of IR. In case of other countries, an online questionnaire was addressed only to IR system staff. Hence cent percent awareness is obvious. {Tables 20(I), 21(F)}.

- Among developing countries Indian libraries have taken lead in setting up of IRs. 47 Indian system staff respondents have indicated the availability of IR in their organizations. But if one sees verifies the same on Internet or well-known IR directories like ROAR and Open DOAR, there are 27 IRs setup in India. All respondents from abroad have responded positively
about availability of IR in their organization as expected. {Tables 22(I), 23(F)}.

- A good number of institutions in India although have set up the IRs, but made them available only on the LAN of their institute or on a single system due to various reasons like copyright problem from publishers or reservation of their management to throw open their publications. {Table 22(I)}.

- More than 50% IRs in India have digital documents ranging from 500 to 1500 and 5 have more than 1500. In average number documents held in Indian IRs is more than corresponding figures out of responding IRs from abroad. {Tables 24(I), 25(F)}.

6.1.3 IR Software and Systems

- DSpace and e-prints are the most preferred IR software adopted by majority of the institutions in the world. However, DSpace is most popular in India followed by e-prints and GreenStone. An interesting observation is that few institutions have used both DSpace and e-prints for handling different kinds of documents like thesis and research papers. {Tables 26(I), 27(F)}.

- A few years back eprints had an edge over DSpace and now it is the other way round. All those promoting DSpace have conducted effective training programs everywhere resulting in its popularity. {Tables 26(I), 27(F)}.
• Although DSpace is very popular software the user of eprints seem to be contended about its features and functionalities and also due to release of the recent version with many more useful features. {Tables 26(1), 27(F)}.

• In spite of the availability of open source IR softwares few institutions have developed their own software and few continue to use the commercial ones. Few others have used indexing module of library automation system with links to the full text available in their search devices. {Tables 26(1), 27(F)}.

• Only a small percentage of systems staff have indicated their plan to migrate to other softwares. Interestingly majority of the Indian respondents did not even responded to this question, the reason being most of them still do not have IR in their organization. {Tables 28(1), 29(F)}.

• While every system functionality is important for depositing, organizing, indexing and retrieval of full text documents, the rating of different functionalities of the system software varied by respondents both within India and abroad. The most important functionality as responded by Indian system staff is capability of searching the contents followed by their conformity to open access standards and flexibility for choice of metadata. However, the foreign respondents have rated the open standards first followed by searching capability, metadata choice, front end interface and
customization as most important factors for rating IR system functionalities in the order of their choice. Many of these system functionalities like browsing, support to different file formats, customization, authentication, access control, up gradation and documentation. {Tables 30(I), 31(F)}.

- Most of the IR software under study prefer the different full text file formats like PDF, HTML, Post Script, PPT, Excel, Image, etc. {Tables 32(I), 33(F)}.

- The most preferred search keys used for retrieval documents from IRs or harvesting services or general search engines are keyword and subject as confirmed by IR system staff both from India and abroad. The preference of other key is context dependent and using Boolean operators for limiting search for example by year. {Tables 36(I), 37(F)}.

### 6.1.4 Advantages of IR

- IRs provided a new and innovative channel of scholarly communication both for already published documents and the documents falling under the grey literature category. {Tables 46(I), 47(F)}.

- The most important advantage as opined by both IR system staff is that IRs provide wider access and visibility to the research output. {Tables 46(I), 47(F)}.
• The IRs play a vital role in the preservation of institution’s heritage as the authorities/ faculty/ scientists would not permanently be in the institution but the IRs once built up, maintained and updated will continue to be the source for information on the research carried in the concerned institute irrespective of its age. {Tables 46(I), 47(F)}.

• The IT has reduced the publication delay as it helps faster communication and avoids duplication of work especially while preparing the manuscript, editing and reviewing. In spite of this the publication delay ranges from two months to one year by different journals even today. However, this delay is very minimal in case of IR. {Tables 46(I), 47(F)}.

• The grey literature like Technical Reports, Theses, in house publications are not generally published for wider circulation. IRs fill up this gap. {Tables 46(I), 47(F)}.

• IRs not only increase the prestige of institution but also increase the citation to the publications be it a grey literature or an item already published in a journal. {Tables 46(I), 47(F)}.

• IRs especially in India have brought an IT culture in the library and defined a new role of library in scholarly communication. {Tables 46(I), 47(F)}.

• While communication channels like journals and conference proceedings make available only scholarly communication, IRs provide an effective
communication channel giving access to all kinds of documents including journal articles, conference papers, technical reports, thesis, inhouse publications, patents, standards, images, teaching material, PPTs and so on. {Tables 46(1), 47(F)}.

- Although rating of preferred advantages by IR system staff in India, IR staff abroad and users varied the first four advantages are by and large same as rated by all. {Tables 46(1), 47(F)}.

6.1.5 Factors for success of IR

- Suitable infrastructure is the basic necessity for setting up of IR and played an important role as a factor for its success. Suitable internet band width is required for faster communication facilitating quick downloads for the users visiting IR. {Tables 48(1), 49(F)}.

- Suitable IR expertise for handling different stages of work flow in setting up of IR is most important factor for the success of IR. {Tables 48(1), 49(F)}.

- Adoption of inter operability standards facilitate metadata harvesting both by the harvesting services as well as general internal search engines like Google scholar. {Tables 48(1), 49(F)}.

- Number of downloads of documents held in IR is the most preferred factor for assessing success of IR. This view is supplemented by second
preferred factor the IR users survey both meaning the same utility. {Tables 74(I), 75(F)}.

6.1.6 Sustainability of IR

- The development, success and sustainability are inter dependent aspects of an IR. IR development based on sound institutional policy with sufficient allocation of funds ensures the continues growth and the sustainability of IR. {Tables 50(I), 51(F)}.

- The continuous growth of IR can be achieved only by the cooperation/participation of the faculty/researcher both for contributing the documents and usage of the content. {Tables 50(I), 51(F)}.

- The information literacy among both library staff and user community, one of the IR marketing/popularity strategy becomes a pre-requisite for the growth and sustainability of an IR. {Tables 68(I), 69(F)}.

6.1.7 Constraints of IR

The Open Access Movement has a big challenge especially the publishing industry of journals under commercial sector challenging their sovereignty. The management support, availability of IR expertise, willingness of authors to participate are very important factors for the success and sustainability of IR. {Tables 52(I), 53(F)}. 
• Absence of a well defined institutional policy is a serious constraint for IR development. Uncertainty will exist about the norms to be adopted for inclusion of documents regarding the person depositing the document, the need for review and technical evaluation of the document, types of documents to be included and the level access control. {Tables 52(I), 53(F)}.

• IR being a new development, there is serious lack of IR expertise especially in a developing country like India. Many institutions although serious to set up IR failed due to non-availability of IR expertise from both library and IT staff. {Tables 52(I), 53(F)}.

• The management and the authors concerned about forms a serious bottleneck in building the content of an IR. Many institutions fail to allocate sufficient funds for IR. The basic necessities like IR infrastructure availability of expertise can not be fulfilled without adequate funds. {Tables 52(I), 53(F)}.

• Another important constraint is apathy of authors towards time consuming and lengthy deposition procedure. {Tables 52(I), 53(F)}.

• Ignorance of users in the absence of appropriate literacy program is another constraint with viz. one cannot expect any developments in IR. {Tables 52(I), 53(F)}.
• In case of journals and conference proceedings usually copyright of a research publication lies with the publishers. The publisher's rigid attitude for allowing the published item in IR and the authors concerned in this matter is another constraint to be sorted out appropriately. (Tables 52(I), 53(F)).

6.1.8 Institutional policy and IR Management

The development, maintenance and updation of IR needs sound institutional policy and participation and cooperation of various committees and groups.

• The governing board is the most important body to oversee aspects of development of IR under which all other committees and task forces are required for carrying out different activities such as deposition of documents, training, maintenance, updation, quality control and access control. Various task forces have to be formed who ultimately play a very important role. (Tables 42(I), 43(F)).

• Coordination committee plays a key role in coordinating various task force groups, governing board, users/ contributors and the IR staff. (Tables 42(I), 43(F)).

• Qualified and trained library staff is most important to carry out the activities at all stages of the development and maintenance of IRs. This is confirmed by the respondents IR system staff both from India and abroad.
However IT staff also plays their own role for the maintenance infrastructure and writing small programs to handle the local requirement of the software adopted. The most preferred staffing by the respondents is to engage the existing library staff for this activity. However adhoc/project staff is required for carrying out other works concerned to IR. {Table 70 (I), 71(F)}.

- Most of the respondents prefer to get the funds for IR as a part of library budget. However, they also prefer to get the funds through a special project and also as a part of publications budget. A good number of respondents feel that IRs will result in the prediction of regular library budget. {Table 38(I), 39(F)}.

- It is also opined that IRs enhances the buying capacity of libraries due to low cost and also open access. However unless open access becomes the order of the day, and all the publishers allow the authors to deposit the documents on to the IRs, it is difficult to have a clear idea on repercussion of IR on library budget. {Tables 40(I), 41(F)}.

- While rigid attitude of publishers of journals regarding copyright policy for inclusion of published articles is a serious issue, who has to check the same is a question. Indian IR system staff preferred IR managers for this job. On the other hand, their counter staff abroad preferred the legal section of the institute for this purpose {Tables 62(I), 63 (F)}.
An overwhelming majority of IR system staff both from India and abroad do not like to have any sort of access control of documents held by IR and prefer IR to be open access worldwide (Tables 34(I), 35(F)).

The most preferred IR model is decentralized IR with harvesting facility by one or more institutions. The subject based harvesting services are also preferred. (Tables 54(I), 55(F)).

Most of the IR system staff prefer the faculty / scientists as authorized person for deposition of documents into IR. However users in India feel the other way round and prefer the library staff to do this job. The situation in other countries is bit different as most of the users are familiar for this one. (Tables 56(I), 57(F)).

While there are many ways of motivating the users for contributing their papers majority of the respondents feel that contributions should be made mandatory. They also suggest incentive scheme for this purpose. It may be worthwhile to adopt suitable method depending upon the nature of users in the institute or use a combination of different methods of motivating. (Tables 58(I), 59(F)).

The quality of the content of IR is more important in the long run and hence need technical and legal review of the documents after submission. This is confirmed by most of the respondents. Most of the respondents
have identified the library manager as an authority for setting up of IR and feel that librarian should play a lead role in setting up of IR system. All the respondents including IR system staff and users advocate information literacy program as the preferred marketing strategy for popularizing and development of IR. \{Tables 60(I), 61(F), 64(I), 65(F), 72(I), 73(F), 76(I), 77(F)\}.

- Most preferred trainers for IR literacy program are library staff as confirmed by responses of IR system staff both from India and abroad. \{Tables 78(I), 79(F)\}.

6.1.9 Users Perspective

Institutional Repository being a new development as a part of the Open Access Movement, the awareness about IR among the users is less compared to that of library community. This inferences is evident as the responses are not consistent in answering for different questions while soliciting their opinion on the same topic. However, it is satisfying to note that about 286 users/ contributors from different backgrounds have responded. The survey gave a mental exercise to all these users. Perhaps they would have had possible discussions with their librarians to clarify some of their doubts on the questionnaire.

- Users depend upon mostly journal articles as an input for their research activity followed by books and conference papers. However, the other kinds of documents have their own role to play depending upon the type of
information required, type of institution and the nature of the research activity. {Table 83(U)}.

- Most of the Indian institutions surveyed have high academic and research activities resulting in preference of primary sources of information like journals for their activity. The next preferred type of documents include conference papers, books and thesis. The requirement of other kinds of documents like technical reports, patents, standards although not preferred by majority are critical in institutions working on development of technologies. Both the IR system staff and users have confirmed this observation through their responses. {Tables 83 (U)}

- A small percentage of the users responded visit the library daily. However, the corresponding number for once a week and once a fortnight is more. Now that the good number of electronic resources especially most referred journals are electronically available on the desktop of researcher and hence their dependence on library is not confined to daily visits. {Table 85(U)}.

- It is natural that the most preferred conventional library service by users is transactions at library counter followed by access to e-journals. However the other services too are preferred/ used by user community. {Table 86(U)}.
- The preference of bibliographic databases depends on the area of research work of researchers. Among the responded users Chemical Abstracts is most preferred one followed by BIOSIS, Web of Science, Medline and J-Gate. Other databases too are preferred, but by specific user community. Web of Science although globally well known as an indexing and citation database is yet to become popular among Indian users community. The reason could be its non-accessibility which is due to exorbitant cost not affordable by majority of libraries in India. {Table 84(U)}.

- The most preferred web enabled information service by users are library OPAC as they would like to know availability of documents in the library from anywhere and also would like to have access to on-line journals from their desktops. {Table 87(U)}.

- Awareness of users varied, some are not aware of open access journals and some IR. But it is satisfying to note that majority of users responded positively for this question. Interestingly, two of the respondents were not even aware that IR has been set up in their own organization and operation for the last two years or so. Users have given almost same weightage for both librarian and Internet for source of awareness about IR. {Tables 20(I), 21(F)}.

- Authors/ users prefer journals articles and also grey literature both from the point of view of depositing and retrieving. While journals articles get
further visibility and usage, the grey literature like technical reports find prime communication media in the form of IR. \{Table 89(U)}.

- Users like to publish their research output to get maximum visibility and naturally tend to publish in International journals in their field followed by open access journals. Only when user is not very confident about the quality of his research findings, may like to publish in a media having lesser accessibility as he may be more concerned about the number of his publications on a mandatory requirement. \{Table 90(U)}.

- Only a small percentage of users responded have previous experience of self archiving and some of them could have given links of their full text articles through their personal/ institutional website. Indian user community is yet to be convinced and trained for self archiving of their publications if one aims at sustainability of IRs. \{Table 91(U)}.

- While the users appreciate the benefits of IR including wider access to their research output and visibility, preservation of heritage, increased citation counts reduction in publication delay, availability of preprints and easy/ free availability of research material, the top preferred one the first three in this list. Some of these benefits are interdependent. \{Table 96(U)}.

- Users consider information literacy as most important factor responsible for success of IRs followed by good infrastructure made available for
setting up of and accessing IRs. They also need of appropriate IR expertise to set up IR, build the content, train the users, etc. {Table 97(U)}.

- The most preferred channel for deposition of research material by users is IR followed by open access journal and e-prints archive. Few researchers also prefer their personal/ institutional websites for this purpose. {Table 92(U)}.

- It is interesting to note that in spite of the maximum users responded belonging to Engineering background discipline, preferred Chemical Abstracts as the most preferred bibliographic database. Absolutely there is no relation between number of responded users from a discipline to preferred subject based database. This is due to inter disciplinary nature of contemporary research. {Table 84(U)}.

- Unlike other countries the library community is acknowledged for bringing awareness about IT among user community in India. This is obvious in almost all IR initiatives that are in operation in India are by librarian. The users also give credit in this matter to their usage of Internet. {Table 88(U)}.

- PDF is the most preferred file format preferred by users for downloading of full text documents due to various reasons like original look, file size, figures, etc. Other file formats like Postscript, PPT, HTML, etc., are used depending upon the usage and availability to a lesser extent. {Table 93(U)}.
• Tendency of user community not to put any restriction to give access to their publications world over is very clear. They even prefer to make available their documents free on internet. Still a small group of users have varied reservations in this regard like access against registration, for personal use, restricting to certain geographical regions, etc. Authors also naturally expect acknowledgement mostly in the form of citation to their publication. {Table 94(U)}.

• The type of repositories preferred by users are both national/ international level IRs/ harvesting services and subject based e-prints archives. Less preferred are the ones set up by individual organizations. Probably the main access point is gateways, harvesting services providing unified search services at metadata level. Although most of them lead the users to individual IRs for full text. {Table 95(U)}.

• Most important reason for contributing their documents to IRs is wider access to their research output followed by preservation for heritage, external recognition and facilitating outside contact in their field of interest. IRs provide alternative and ideal channel for getting wider visibility. {Table 98(U)}.

• IRs being recent developments users are yet to be familiarized about their importance, deposition procedure, etc. More importantly they are more
concerned/ confused about varied copyright policies of different publishers. While this being the main constraint they quote, other ones which they have mentioned is not aware of IR at institution including their reservation in making available world over may be due to sensitivity of their publication especially grey literature. {Table 99(U)}.

- Interesting users/ authors prefer librarian an authorized person for depositing their documents. In fact it should have been the other way. Least number of users responded preferred IT staff for this purpose. {Table 100(U)}.

- Even the users prefer to have quality control especially technical and legal review of documents submitted to IR. While the items from refereed journals can be added to IR straight away, there is a need to have technical quality control in case of grey literature like technical reports. But IR managers have little scope for quality control in case of thesis. {Table 102(U)}.

- Majority of the users feel that author’s institution should have the ownership while the rest of the respondents want author’s to be the owner. {Table 101(U)}.

- An overwhelming majority of users agree for submission of grey literature like thesis, technical reports and in-house publications to IR as this is the
only channel giving wider access to this category of literature. {Table 103(U)}.

6.2 Suggestions

The Open Access Movement being relatively a new development in the scholarly communication scenario, the developments in IR in India are worth appreciating. The L & IS community in India has taken a lead role in this matter. Although more than 47 IRs have been set up in India only 27 of them have been made open access through Internet. Few Institutions including IISc, 2-3 IITs, 3-4 CSIR laboratories are different front runners. It is also learnt that 2-3 ISRO organizations and 1 or 2 DRDO organizations have set up their IR but have made them accessible through their respective intranets. There is an urgent need to take necessary policy decisions for setting up and implementation of IRs by all leading universities and R&D establishments in the country. The study comes out with the following suggestions/guidelines in this matter.

6.2.1 Suggestions based on Data Analysis and Interpretation

1. The government and the governmental agencies including universities, and important research establishments like CSIR, ISRO, DRDO, ICAR, ICMR, ADE, DST, DBT have to take a policy decision for setting up of IRs in their respective organizations.
2. An intensive awareness should be brought among both the librarians and the users (contributors and readers) covering the benefits of IR both for the individual concerned and the institution.

3. Apart from inclusion of the topic IR as a part of syllabus in L & IS curriculum, we need to conduct workshops and training programs leading for creating expertise in setting up of IRs.

4. At national level, we need to develop the capability of customizing the Open Access software to suit local requirements.

5. It would be nice if one arrives at consensus on standards to be adopted for implementation of IRs in the country.

6. While one can think of announcing some incentives for contributions of research output to IR, one can also think of making it mandatory at individual Institutional level for contribution.

7. While it is advisable to have IRs at the Institutional level, one can also think of setting up of metadata harvesting services covering different sectors both by organizations and by subject.

8. There is a need to set up a Registry of Indian Repositories in line with ROAR and OPENDOAR registries.
9. All leading universities and R&D establishments and also consortia coordinators should write to all commercial and societal publishers to allow individual scientist to deposit their research publications from the concerned individual institutional IRs. This would facilitate development of IRs without infringement of IPR of publishers.

10. All institutions should provide necessary infrastructure including servers, PCs, scanners, internet bandwidth and software required for setting up of IR and also required funds and manpower.

11. It is better for the institution intending to set up IRs to adopt one of the open source software like Dspace or Eprints as they are already popular and satisfy most of the functionalities of IR, open source and comply with all open source standards concerned.

12. Apart from developing Institutional repository, the individuals can also think of making available publications through subject based e print archives and also individual personal websites as another step towards Open access movement.

13. The long-term preservation of their digital holdings should be a matter of concern for Institutional repositories and should be addressed appropriately in consultation with archiving and also take care of technological obsolescence especially concerned to full text file formats.
14. Libraries should also try to integrate OPACs with their respective IRs.

6.2.2 Suggestions/Observations by IR Managers / Librarians and Users

IR MANAGERS (INDIAN)

1. IR Repositories in India is still in initial stage. It is a useful initiative which is very useful for Academic and Research activities.

2. There is a need for Librarians and IR Managers to go a long way in order to exploit the full potentialities of the IR concept.

3. Copy right and IPR are the issues to be resolved in view of developing IRs.

4. In order to support open access movement, it is worthwhile that each institute must develop IR and provide open access to its research output including grey literature.

5. The IR Managers/Librarians strongly support IRs at every organizational Information Centers, in order to have, awareness of harvest thoughts, innovations, creativity ideas etc. among institutional members.

6. Setting up of IR is a project associated with Scientists, Researchers, Administrator of the institute, Librarians/IR Managers which needs strong policies.
7. The main constrains being faced by many institutions are due to 1. Extremely shortage of manpower, 2. Inadequate infrastructure, we would not initiate the IR. Since it is very important area and require now a days, therefore we will take up as a project on priority basis.

8. Institutional repository of an institution should be mandatory and the policy should be taken at the UGC level to develop IR in every institution. There should be a similar policy instruction for all the educational and research institutions.

**IR USERS (INDIAN)**

1. Open access system will improve the research quality and to know about the cutting edge research.

2. Setting up of an IR is very easy but sustaining it over the period of time is going to be a challenging task.

3. A sustained effort is needed to impress upon the researchers about the benefits of OA.

4. Migrating from one software to another is not straight forward with the existing IR software.

5. It is strongly recommended that every institution or organization should have IRs,
to keep aware of the internal activities/ research /projects/ policies/
procedures, etc., at any point of time on intranet.

6. IRs are playing an important role in the dissemination of research
information, that would otherwise be much less accessible in a country like
India, where university libraries face severe budgeting constraints.

7. Excellent system useful for reference and retrieval purposes.

8. Many developed nations are making moves towards a National Policy on
OA. India is lagging behind. It must be impressed upon Policy Makers
that ‘All that is OA’ is NOT sub-standard. We should first implement OA
policy which includes ‘Peer Review Process’ on new with ranked journals.
The ONLY difference is we are now going to work in the ‘OPEN’ as
against ‘CLOSED’, ‘COSTLY’, ‘CIRCLES’ OF RANKED journals.

9. Lack of technical skills is the main hurdle for setting up of IRs.

10. There are classified documents (restricted) which needs to be accessible
only to the institution's personnel which should not be in open access.

11. Institutional Repository is required to be maintained open access which is
very good for scientists in India.

12. Solutions to be found for restricted reports, Copyrighted material access.
   Proper review required for unpublished and un reviewed (peer) material.
13. The open access movement and institutional repository is good. Care must be taken in some cases which are restricted. The access should not be created for such kind of work.

14. OAM and IR are very useful as they allow access to such a wide variety of information at just the click of a button—truly amazing and useful.

15. Institutional Repositories will strengthen research.

16. Researchers should be make maximum use of it of the Institution's scholarly output.

17. As long as careful screening is done to check quality of content, strategic nature of content, etc., it is a good idea. It should essentially serve as an extra archival facility.

18. One of the concern's is regarding the strategy in the Indian system. The users always 'we resist change' at all levels.

19. IRs is providing very good services for putting published work in open domain.

20. This facility is really helpful for people engaged in research.
21. Institutional Repositories will solve some of the problems related to particular search, especially Authors search where one can get all the papers (referenced) of a particular author if uploaded immediately.

22. IRs are useful for developing country like Indian scholarly communication will grow. Visibility and import of Indian research output will increase.

23. India is concerned there should be a support from Central and State Government and the concern Institution's support.

6.3 Conclusions

An Institutional Repository is the intellectual capital of an institute and recognizes the intellectual life and scholarship of our academic and research organizations. IRs facilitates building the digital collections to be searched and accessed freely by anybody in world. Above all, IRs preserves the heritage of the institute. Setting up of an IR needs a planned approach for the implementation tasks defined by their governance structure, management framework, operational strategies and a well documented workflow. Adoption of the standards and choice of models are critical factors for developing an IR. The two main Open Access channels, the Open Access Journals and Institutional Repository have been most talked about topics among the academic and research community all over the world. The open access movement was triggered by the journal crisis due to exorbitant price increase of the publications.
More than 1,100 IRs have been set up in the world, and India with 29 IRs as listed in ROAR leads the developing countries with in this regard. Most of the IRs particularly in India have neither preferred the governance and management structures nor documented the procedures and practices.

A good number of institutions in India although set up their IRs have not made the content open access due to various reasons. There is no perceived growth in the number of documents added to many IRs in the world. Apart from a good number of metadata harvesting services like OAIster, ARC, general Internet search engines like Google, Yahoo and SCIRUS also harvest the metadata of repositories in the world and give the links to the individual IRs for full texts. Among the IR software adopted DSpace and GNU Eprints are very popular and also are open source. There have been few open access declarations by few professional societies and also governments of few countries by legislation. This move is yet to pick by other countries. The advantages of IR for individuals and the institutions are well accepted. The self deposition of documents by the creators is yet to pick up in the world and in particular, India. The copyright restrictions of publishers discourage the authors to submit their papers to IR. However, many publishers including the commercial ones have relaxed their attitudes in this regard by allowing the copy of the final referred manuscript of the paper accepted for depositing in IR. The SHERPA's RoMEo Project serves as a directory of copyright policies of different publishers. Both IR Managers and the users recognize the important role of library professionals in the IR development. A collaborative effort by academicians/scientists/users, librarians, IT
professionals and archivists is required to develop a successful and sustainable IR. There have been only a few efforts to set up IRs or harvesting services at country level. There is a need to pick up the manpower training for developing IRs as well motivate the authors to submit their documents.

It is satisfying to note that good numbers of survey respondents of this study are knowledgeable about IR developments and plan to set up IRs in their respective organizations. Based on the literature review and the survey responses, few IR models have been developed to address the issues and concerns and also understand the procedure and policies for implementing IRs. There is a lot of scope in India to develop IRs at institutional level under various apex bodies like CSIR, ICMR, ICAR, DRDO, ISRO, DST, UGC, etc. It is advisable to have repositories at institutional level with harvesting facilities at apex body and national level.

Despite the growing strength of the Open Access movement, it is difficult to predict whether IR as a communication model would survive in the long run. The study concludes with a positive note as the current global momentum for Open Access is picking up results in setting up of good number of institutional repositories and there by realizing the goal of making freely available the intellectual output created using public funds.