

Re-engineering of Library: A Study of Present Scenario of Library Computerization of Academic Libraries in Sikkim

Khagen Kalita

Nirmal Ranjan Mazumdar

Dipen Deka

As the traditional concept of library is changing towards digital library, the existing manual system should be re-engineered to cope with its changing environment. Computerization of Library & Information is the primary step of re-engineering of Library and Information Services in Digital Era. Here, an effort is made to reflect the present scenario of Library Computerization of Academic Libraries of Sikkim, which includes both the University and college libraries of the State.

Keywords: Academic Library, Computerization, Re-engineering

1. Re-engineering

Reengineering does not mean the using new computer systems in the existing system (i.e. replacing manual system). Rather, it is the modification of the existing system by the computer based system or a new human based system, and can even replace an existing computer based system with a human based system. Microsoft Computer Dictionary defines the term 'Reengineer' (vb) as 'To rethink and redefine processes and procedures.' Encyclopedia of Information Technology defines reengineering the as 'the examination and modification of a system to reconstitute it in a new form and the subsequent implementation of the new form'. Daniel P. Petrozoo and John C. Stepper in their book 'Successful reengineering' define the term 'Reengineering' as ' Reengineering is the concurrent redesign of processes, organizations, and their supporting information systems to achieve radical improvement in time, cost, quality, and customers' regard for the company's products and services.' Though this definition is based on the company environment; in Library and Information Services and System also it is applicable more or less. Here, in the LIS environment, the term Customer is replaced with term User and term Company will be replaced with Library and Information Centre.

1.1 Objective of Re-engineering

- To satisfy the Customer's (users') need and expectation
- Achieve improvement in the performance
- To satisfy the organization's strategic goals
- Remove the non essential aspect of the library which are not necessary n running its functions

1.2 Challenges of Re-engineering

- Resistance to changes of management style and reporting structures
- Politics
- Fear of job loss
- Need of successful leadership for successful implementation of reengineering.

1.3 Characteristics of Reengineering

- Reengineering is applied in an existing user-oriented organization to make it more users friendly. It means, the concept of reengineering is applicable with an existing system only because the reengineering concept means the replacement of the existing system with a new or a modified system.
- Another thing is that the reengineering is not a solution or an immediate answer to a specific problem rather it is applicable to a long term problem and it should be noted that the full benefit of reengineering can be realized after years.

2. Reengineering of Library and Information System

When we discuss about the reengineering of Library and information system in a digital era, the application and utilization of computer comes automatically, because the computer is the basic element of the digital environment. With the computer technology, now the library professionals do their work digitally and the users are also searching their information digitally. The library documents are now available digitally both in online as well as offline forms, which make it easier both for the library staffs and users working their job digitally. For shifting from the traditional 'printed books environment' to the 'digital environment' the library system should be reengineered. Already in the discussion about the characteristics, it is clear that re-engineering does not imply replacing the existing system completely, but to include new methods and technologies to the existing system to revamp it. And for this purpose, we have to first study the existing system and find out its feedbacks. After that, we can suggest the necessary changes that can improve the existing system. It is not that the process is over here. The system after the changes has to be tested and to find out whether it is working efficiently or not. The concept of System Development Life Cycle (SDLC) can be applied here.

Information technology strongly influences information system development. We can use a more engineering approach such as the System Development Life Cycle (SDLC) which is a systematic procedure of developing an information system through stages that occur in sequence.

System development is done in stages which include:

- Problem recognition and specification
- Information gathering
- Requirements specification for the new system
- System design
- System construction
- System implementation
- Review and maintenance

3. Computerization of Library and Information Center

Computerization of Library and Information Center means the use of the use of automatic machines or processing devices in libraries. The computerization may be applied to library administrative activities, office procedures, and delivery of library services to users. The main objective of computerization of library & information centers is not the replacement of manual system, but to make the regular house keeping operations of a library & information centers. Ultimately this will save the time of the reader and the user, which will fulfill the 4th Law of Library Science. The application of computer in library & information centers started with preparing bibliographic databases, then one step ahead to house-keeping operation, then to digital library, library 2.0 and now the library may be at your hand with 3G technology. With the advanced application of information & communication technology, the library is now becoming a global information hub, available and accessible to the users with a single mouse click on the computer monitor, 24 hours round the year sitting at the most remote places too.

4. Need of Re-engineering of Library with Computerization

With passes of the time and as a result of the ongoing research and development on the application of science and technology, the library once which was the repository of books and manuscripts only for the ruler & scholar class of the society are now turned to the people's information center. With the mushroom of growing of the literature both in printed and digital form, now the library and information centers are flooded with the various forms of documents which creates problems both for the staff and the users in its proper organization and utilization and this leads us to think about the reengineering of manual library system. For this the first and foremost step is the library computerization which leads the whole library system to an computerization stage.

The following factors necessitate the computerization a library system:

- Capacity to handle any account of data and information;
- Speedy processing of information and flexibility in information search and its retrieval;

- Standardization of library procedure;
- Participation in network programming and resource sharing;
- Provide better bibliographic control at local, regional, national and international Level;
- Avoid/eliminates duplication of work;
- Economic implications of latest information technology;
- Overcome geographical and other barriers to communication and
- Improve the quality of existing services and to reduce routine and time consuming clerical works.

5. Library Computerization of Academic Libraries of Sikkim

Sikkim, a very small hilly state in the Eastern Himalayas, consisted of four districts, is the 22nd State of India came into existence with effect from 26th April, 1975. The total population is 540,493 which is .05% of the total population of India with 82% of literacy rate. At present Sikkim has 6 colleges including the deficit and non-deficit, along with 1 Medical College, 2 Technical Colleges, 2 B.Ed. Colleges and 2 Central Universities and 1 Private University.

5.1 Objective

The basic objective of the paper is to show the present status of the computerization of the academic libraries of Sikkim. Along with this objective, we have tried to explore the following basic things related to an academic library.

- Collection of the libraries.
- Library services.
- Manpower & their training for library computerization. etc.

5.2 Scope

There are 3 Universities and 11 Colleges in Sikkim. Out of these, in our present study we have included only the 3 Universities and 6 College Libraries.

5.3 Methodology

We used a questionnaire as well as interview method for collecting the required information related to our study. We have collected all these data in the month October & November, 2009; visiting the Libraries.

5.4 Findings

The following findings are the result of the analysis of the collected information based on our survey.

5.4.1 General Information

Out of the 3 University Libraries, 2 Universities are central University (Sikkim University and Central Agricultural University) and the Sikkim Manipal University is a private University. Sikkim Manipal University is the oldest one, which was established in the year 1995. The colleges of Sikkim are offering courses under the all the Faculty of. Arts, Science, Commerce and Law of Sikkim University. There are 6 colleges in Sikkim, which are Government and deficit as well as non deficit colleges. Among them, one college is providing degree in Law.

All these 9 academic institutions of Sikkim have their own Library.

The complete information is included in the following Table.1

Table 1 (a) Name of University Library with the year of establishment

| SI no | Name of the University | Year of Estd. | Name of the Library |
|-------|---------------------------------|---------------|---------------------------|
| 1 | Sikkim Manipal University | 1995 | SMMIS Central Library |
| 2 | Central Agricultural University | 2006 | CAEPHT Library |
| 3 | Sikkim University | 2007 | Sikkim University Library |

Table 1 (b) Name of college library with the year of establishment

| SI No | Name of the College | Year of Estd. | Name of the Library |
|-------|--------------------------------|---------------|---------------------------|
| 1 | Sikkim Govt.College | 1977 | SGC Library |
| 2 | Sikkim Govt.Law College | 1980 | Law College Library |
| 3 | Namchi Govt. College | 1995 | Namchi College Library |
| 4 | Harkamaya College of Education | 2003 | H.C.E. Library |
| 5 | Palantine College | 2004 | Palantine College Library |
| 6 | Rhenock College | 2005 | Rhenock College Library |

5.4.2 Collection of the Libraries

The Table 2 shows the collection of the university and college libraries of Sikkim. All the academic libraries including both the university and college libraries have a good collection of document. From our

survey, we have come to know that SMMIS Central Library has the highest Library collection among the three universities and the SGC Library has the highest collection among the college libraries.

Table. 2 shows the Collection of the Academic Libraries of Sikkim

Table. 2 (a): The collection of the university libraries of Sikkim

| SI No | Name of University Library | Printed | Non-printed | Total Collections |
|-------|----------------------------|---------|-------------|-------------------|
| 1 | SMMIS Central Library | 10091 | 330 | 10421 |
| 2 | CAEPHT Library | 5669 | 40 | 5709 |
| 3 | Sikkim University Library | 4500 | 50 | 4550 |

Table. 2 (b): The collection of the college libraries of Sikkim

| SIL No | Name of College Library | Printed | Non-printed | Total Collections |
|--------|---------------------------|---------|-------------|-------------------|
| 1 | SGC Library | 10,000 | - | 10,000 |
| 2 | Law College Library | 4000 | - | 4000 |
| 3 | Namchi College Library | 6500 | - | 6500 |
| 4 | H.C.E. Library | 7472 | 62 | 7534 |
| 5 | Palantine College Library | 660 | - | 660 |
| 6 | Rhenock College Library | 2600 | - | 2600 |

5.4.3 Library Services

The libraries under the study are having library facilities of different levels. The traditional services such as issue and return and reference service are being common to most of the libraries. But obviously in the university libraries, some more services are there in comparison to the college Libraries.

The Table-3 reveals the different services being offered by the academic Libraries of Sikkim.

Table 3 (a): The Services of the university libraries of Sikkim

| SI No | Name of University Library | User Education | Circulation | Reference service | Internet | Documentation | CAS | SDI | Reprography Service |
|-------|----------------------------|----------------|-------------|-------------------|----------|---------------|-----|-----|---------------------|
| 1. | SMMIS Central Library | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| 2. | CAEPHT Library | Yes | Yes | Yes | Yes | No | No | No | Yes |
| 3. | Sikkim University Library | Yes | Yes | Yes | Yes | No | No | No | Yes |

Table 3 (b): The Services of the college libraries of Sikkim

| SI No | Name of College Library | User Education | Circulation | Reference service | Internet | Doc | CAS | SDI | Reprography Service |
|-------|---------------------------|----------------|-------------|-------------------|----------|-----|-----|-----|---------------------|
| 1 | SGC Library | - | Yes | Yes | - | - | - | - | - |
| 2 | Law College Library | - | Yes | Yes | - | - | - | - | - |
| 3 | Namchi College Library | - | Yes | Yes | - | - | - | - | - |
| 4 | H.C.E. Library | Yes | Yes | Yes | Yes | - | Yes | Yes | Yes |
| 5 | Palantine College Library | - | Yes | Yes | - | - | - | - | - |
| 6 | Rhenock College Library | - | Yes | Yes | - | - | - | Yes | - |

5.4.4 Manpower for Library Computerization

The following tables show the existing position of different professional and non-professional in the university and college libraries.

Table 4 (a): The manpower of the university libraries of Sikkim

| SI No | Name of the University | Professional | Non-Professional | Total |
|-------|---------------------------|--------------|------------------|-------|
| 1 | SMMIS Central Library | 8 | 4 | 12 |
| 2 | CAEPHT Library | 2 | 3 | 5 |
| 3 | Sikkim University Library | 2 | 1 | 3 |

Table 4 (b): The manpower of the college libraries of Sikkim

| SI No | Name of the College Library | Professional | Non-Professional | Total |
|-------|-----------------------------|--------------|------------------|-------|
| 1 | SGC Library | 1 | 4 | 5 |
| 2 | Law College Library | 1 | - | 1 |
| 3 | Namchi College Library | 1 | 1 | 2 |
| 4 | H.C.E. Library | 3 | 2 | 5 |
| 5 | Palantine College Library | - | 1 | 1 |
| 6 | Rhenock College Library | 1 | 1 | 2 |

From the above Table 4 (a), we can say that the University Libraries are full of different Professional and Non-Professional staff. Among the 3, the SMMIS Central Library has the highest staff member totaling 12. But as a newly established University, Sikkim University Library does not have adequate number of staff. They have only 3 library staff in their Library.

The Table 4 (b) reveals that Harkamaya College of Education has maximum library staff including professional staff. Here it is clear that out of 6 colleges 5 colleges have librarian and the Palantine College has neither Librarian nor any professional staff. The college librarians are not well qualified; as all the librarians have completed only the BLISc course from IGNOU. No librarian completes MLISc course.

5.4.5 Library Computerization

Out of 3 universities 2 are fully automated but, computerization of Sikkim University Library is in initial stage. Till date this University has not purchased Library Management Software, as a result the computerization process is not started.

Table 5 (a): The Computerization status and software used in the university libraries of Sikkim.

| SI No | Name of University Library | Fully Automated | Initial Stage | Name of the Software |
|-------|----------------------------|-----------------|---------------|----------------------|
| 1 | SMMIS Central Library | Yes | - | EASY Lib |
| 2 | CAEPHT Library | Yes | - | LIBSYS 4 version |
| 3 | Sikkim University Library | - | Yes | No |

Only Harkamaya College of Education is fully automated. Harkamaya College of Education has started computerization in 2006 and the work is completed in 2008. They are using the software package Soft Link (Asia) Web Version 2.0. The remaining five colleges are not computerized. This information reflects that the present scenario of college library computerization of Sikkim is in initial stage.

5.4.6 Manpower Training

The Librarians besides being professionally qualified have acquired special skill of library computerization by attending different short-term courses, orientation, refresher course etc. During 19-22 August 2008, a 'Regional Training and Workshop on Building Institutional Archives and Digital Library' was held at Sikkim, which was organized by Sikkim Manipal Institute of Technology in collaboration with Indian Statistical Institute and International Council for Science: Committee on Data for Science and Technology, especially for the professional of NE India. About 35 participant from this region participated in this practical oriented programme. The PLANNER is another important activity of INFLIBNET mainly for the Library and Information of the NE India to make the library professionals conscious about the advance application of technology in the library automation and networking; but participation from Sikkim is very poor.

6. Conclusion

From the above study, it is clear that, the University libraries are ahead of the college libraries in case of library computerization as out of six colleges only one library and out of three, two university libraries are fully computerized. In two Universities, different versions of LIBSYS Software are used and the only computerized college Library is using the Soft Link (Asia) Web Version 2.0. The academic libraries of Sikkim can go for SOUL (Software for University Library) as it is developed by UGC-INFLIBNET. INFLIBNET regularly organizes SOUL training programme for the working library professional, for making them technologically skilled so that they can use the software package in their respective libraries in proper way. They can also try the open source library computerization software like NewGenLib, Koha etc., which are freely downloadable from the Internet.

As the computerization is the need of hours for reengineering of library information system and services, therefore the authority of the academic libraries of Sikkim should give proper importance in library computerization as well as the recruitment and training of professional staff for their libraries. The Universities in Sikkim should start the full time post graduate courses on Library and information science, so that the problem of lack of qualified library professional in the academic libraries of Sikkim can be resolved.

References

1. Ali, Amjad. Encyclopedia of information technology. New Delhi, Galgotia, Vol 2(M-Z) 2005.
2. Daniel P. Petrozoo and John C. Stepper. Successful reengineering. Mumbai, Jaico Publishing House, 1998.
3. Dickinson, Brain. Risk -free business re-engineering. Mumbai, Jaico Publishing House, 2004.
4. MICROSOFT CORPORATION. Microsoft computer dictionary. 5th Ed. New Delhi, Prentice Hall of India, 2002.
5. <http://www.sikkim.nic.in> (Accessed on 19/11/2009)

About Authors

Mr. Khagen Kalita, Library Professional, Library Professional, Sikkim University, Gangtok, Sikkim.
E-mail: khagen.kalita9@gmail.com

Mr. Nirmal Ranjan Mazumdar, Assistant Librarian, GIMT, Azara, Guwahati-781017.
E-mail ID: nrmazumdar@gmail.com

Mr. Dipen Deka, Students of SRF, Department of Library and Information Science, Gauhati University.
E-mail ID : dipendeka@gmail.com