



RE-ENGINEERING OF ACADEMIC LIBRARIES IN THE CONTEXT OF MOBILE BASED LIBRARY AND INFORMATION SERVICES

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Abstract: In the age of electronic information, where improvements in technology are re-engineering the global information industry. With the help of technology, Reengineering process has changed the entire concept of libraries from holding to access. It is not just a matter of improving the techniques in processing and providing dissemination of information to their users but it is more a task of retrospective system & services as well as changing pattern of information management through application of technology and scientific management. In this changing scenario, objectives, roles and functions of libraries and librarians need to change and be redesigned, if librarianship as a profession is to survive in the Coming society. The main objective of this paper is to emphasis innovative mobile based library and information services

Keywords: Re-engineering, Mobile technology, Library services

Introduction:

The whole human activity of today is highly affected by the influence of modern technology and hence revolutionary changes should necessary in all institutions houses to re-define their programmes and processes. The process of re-engineering and redefining has received much of impetus from necessity, as old methodologies have proved ineffective in the context of many present day situations and must, therefore, give away to new approaches. Due to information explosion and information pollution knowledge professionals and librarians are facing many challenges. Moreover information are available in various formats, so in order to meet library patrons demands and for running library effectively and efficiently, librarians require skills and must have to introduce new techniques, tools, services to process, store, analyze and to disseminate information to their patrons. The rapid expansion of networked information services, together with the increased emphasis on quality assurance processes, highlights some interesting problems for academic libraries. While strategic planning in academic libraries now reflects a more customer-focused approach, the principal assumption behind most of this planning is that academic libraries are still firmly in the right business and that continuous

improvement of existing practices will lead to greater customer satisfaction.

Academic library and information centre should now adopt these technologies to provide services to their patrons by using mobile phones, cellular networks, cable television and internet. In library scenario, the needs of users are always dynamic and to satisfy diverse needs of all users quickly is a complex task for any knowledge professional or librarian. ICT, Internet and library automation software's made it possible for users to locate what they want without going to library and fulfill their needs. In information system user is an important component and "Know thy Customer" is a cardinal rule.

What is Re-Engineering?

Re-engineering is about inventing new approaches into process structure that bear little or no resemblance to those of previous eras. Fundamentally re -engineering is revolution. It is the search for new models of organizing work. Re-engineering is a new beginning. 'The application of technology and management science to the modification of existing system, organizations, processes and products in order to make them more effective, efficient, and responsive.'

"Re-engineering simply means rethinking and redesign of business process to achieve dramatic improvement in critical contemporary measures of performance,

such as cost, quality, service and speed.” Microsoft Computer Dictionary defines the term ‘Reengineer’ as “To rethink and redefine processes and procedures.” Encyclopedia of Information Technology defines reengineering as “the examination and modification of a system to reconstitute it in a new form and the subsequent implementation of the new form”. It is also applicable more or less in Library and Information System and Services. Here, in the LIS environment, the term Customer is replaced with the term User and term Company will be replaced with Library and Information Centre.

Objectives:

- 1.To understand and analyze structure and utility value of new technologies in the library scenario.
- 2.To find out technological challenges and areas of application of emerging technology in the automated library system.
- 3.To evaluate application of technological services with their advantages and disadvantages.
- 4.To redesign information services of Academics Library.

Need of Re-engineering for Academic Library:

With the growing emphasis on quality improvements, libraries adopting new management techniques to give their best in the form of information products & services. The Management theories & principals which are applicable to an organization can be successfully implemented to library. Following reasons points out the need for Re-engineering in Academics Library:

- a.To cope the challenges posed by information explosion.
- b.To fulfil multidimensional information needs of library users.
- c.To redesign information services of Academics Library.
- d.To provide pin-pointed exhaustive information to the end-users of the library.

Re-engineering of library collection for Mobile based library and information services

In order to cope the challenges of multidimensional information needs of the library users, the library collection should be built in digital format. It may include:

- CDs, DVDs, microfilms, etc;
- E-books, e-journals;
- E-databases;
- E-reference sources;
- Membership with e-consortia

Mobile based Library and Information Services

A growing number of mobile technology users report using the internet in 2012 via mobile phones. The emergence of functional mobile computing technologies enables ‘ubiquitous’ (anywhere\ anytime) access to E-mails, chat, web-browsing useful network services and applications. Smart phones, PDA, and other mobile devices become more powerful for mobile web experience. Wi-Fi technology is also now common and playing key role in network based information creation and sharing.

Now LIS professional can provide effective information and reference service to their users if they adopt mobile phone technologies, it is not only an instrument of communication but library services can be provided to end number of users with the help of mobile technology. Librarians need to do publicity of information products and services to interested users which are very important step, as today the cost of information creation and digital reference services are high, moreover maximum utilization of valuable contents is also necessary, so librarians need to attract them and encourage them for use; they have to make library services more attractive and accessible. Mobile phones and email are also important tools for giving answer of user's question\query within less time and also fast, reliable way of communication.

Most libraries, especially in academic institutions, have one phone line, which is used by chief librarian for administrative purpose and intra-personal communication within the organization. But today emergence of ICT revolution has made mobile phones affordable as well as very popular that it could be deployed at inquiry desk as library community also started using internet capable smart phones, social

networking sites and mobile devices such as Blackberry, iPhone, iPad, Android, Phablet, and E-mail, short message services (SMS) available on mobile phones can be used to inform library user about user orientation programmes, upcoming events, new arrivals, circulate significant circulars, information literacy programmes etc. Use of broadcast, one text message can be sent to all library contacts listed in the address book on the mobile phone at once and to give latest information to end users. Librarians also can send renewals notification alert to their users, information about due and overdue documents messages can send through mobile device and some internet service providers offer free SMS to mobile phone service users on the Internet. Despite this, social networking tools such as Face book, Twitter, MySpace, Second Life are very popular among people, they use them via their smart phones but the only problem is to connect people and contents in a meaningful way and library homepage is not frequently visited by users, so librarians can reach to their patrons via these social networking tools. Some libraries in India have their presence on these social networking sites, So librarians and knowledge professionals should experiment to provide library and reference services to mobile users via SMS and social networking sites, services such as library help and Text a Librarian can provide technological infrastructure to support text based services to mobile users. There is also need to simplify library catalogue\OPAC so that users can use catalogue on the small screens of mobiles. OCLC had released an iphone application enabling users to search World Cat and locate resources at their local academic or public library. The facility of loading podcasts of lectures, tours, tutorials onto both iTunes U and You Tube which can be downloaded and access from users compatible devices are another area of advanced mobile based services. So mobile phone technology could have significant impact on libraries and information services. Smart phones and mobile technology have changed the way we create, use, distribute and communicate information. The application of

telecommunication technology and mobile phones to an automated library system can bring more efficiency to library services.

Library services through Mobile technology

To fulfill the fourth law of library science librarians introduce and provide a wide array of mobile services and many ICT based library service in the library so that they can save the time of users.

- **SMS Notification services:** Library can provide alert services to their users regarding latest arrivals due date, renewals, outstanding fines, issue return notifications and regarding other things related to the libraries and their host institutions in the form of quick SMS and MMS. Such notifications can be generated with help of integrated library management software.
- **Learning services:** Mobile phones are best for e-learning concept. Academic libraries can easily provide e-resources through mobile technology to promote e-learning, distance learning and many other research activities.
- **Database Browsing services:** Libraries provide range of e-resources to their users, with the help of their smart phones they can easily search the library database and get their needed information. Users can easily search library OPAC to know the status of available resources.
- **My library:** My library is personal library space where users can find information and resources of their choosing. Users can read alerts, check records, renew resources, request items, track interlibrary loans and document delivery requests, set up email notices of new books and journals articles, set up preferences for catalogue searching, etc.
- **Access to e-resources:** Many publishers are creating e-books, e-magazines, etc which are compatible with the mobile devices so that user can easily access and read them.
- **Library guide:** Users can access library guides and library tutorials from their smart phones.

- **Document supply :** Users can get non-print materials and other multimedia contents from their smart phones.
- **Reference services:** The library can easily provide references services through mobile phones in the form of SMS, MMS, e-mails, etc.
- **QR Codes:** ‘Quick Response’ codes in the form of basically two dimensional bar code which contains any alphanumeric and often used to store rules, text, etc., known as ‘mobile tagging’.

Prerequisites for implementing mobile-based library services

- It is necessary to have a carefully planned requirement study to know the practical situation like, the kind of services to be provided on mobile devices and type of devices to be used.
- Library need to acquire the required hardware and software after market survey.
- Library must provide physical and virtual environment for using mobile devices and accessories.
- One needs to ensure that the customers having mobile phones of different network operators are in a position to avail the services.
- It is a prerequisite to optimize library OPAC, website, and databases for mobile devices and introduce new services wherever possible.
- Security and authentication is a matter of concern in mobile services particularly due to availability of web contents on a 24x7 basis to prevent damage or loss to the data.

Advantages of implementation of mobile technology in libraries

- **User friendly Aid:** Familiarity with their own devices and technology helps the users in accessing information quickly and does not require orientation and training. Mobile users are using the facilities on mobile phones like SMS, instant messaging, web browsing, e-mail effortlessly to communicate. Most of these features are pre-installed on mobile devices or option for data plan packages.

- **Personalized Service:** Personalized service helps users to interact with library staff to seek specific information or reference away from library.
- **Ability to Access Information:** Information access from anywhere at any time will be of great help for users who cannot visit library in person and provides a constant link to required information resources.
- **Time Saving:** Users need not record information about resources while browsing and searching library resources or wait at library transaction counter to renew/reserve books and hence the time of the user is saved.
- **User Participation:** Libraries can enrich OPAC by allowing users to incorporate user created content like notes or images uploaded by users.
- **Limitless Access:** All online resources accessible on their desktop also become accessible through mobiles.

Drawbacks and Limitations

- Compared to wired Internet services, has relatively slow transmission speed
- Insufficient contents
- High price
- Lack of staff awareness and familiarity
- Lack of appropriate mobile-friendly academic content to meet learners’ need
- Difficulty in supplying content to an increasingly mobile student body
- Increasing staff reductions and other cutbacks.

Solutions

Libraries should conduct analysis and make smart decision, such as-

- Support staff education
- New funding models,
- Protect them from deceptive content agreements with third party provides.
- Need the expert knowledge of mobile devices to flow through the profession and not just lie in the hands of recent library school graduates
- Create opportunities to educate staff, build local expertise, and promote discussion by offering training sessions and professional development options.

Skill Requirement for the Library Professionals in Re-engineering:

- The re-engineering environment made the librarians to acquire new competencies and skill regarding:
- New re-engineering innovations such as INTERNET,
- Professional skills with practical approach,
- Preservation of Re-engineering resources,
- Data base creation and various models of it,
- Attending to the trouble shooting systems,
- Scanning, indexing, conversion and linkage issues,

Conclusion:

Today Reengineering has brought revolutionary changes in the whole world of information at each and every moment. This revolutionary change is also prevalent in the case of libraries and information centers. So, application of Reengineering is an indispensable part of modern library system development, organization, management and services. It is fundamentally important for the future of libraries and the ultimate creation of a true library without walls. It introduce new ways of information handling, the process of implementing re-engineering in academic libraries involves a conceptual change in library professionals and a cultural transformation in the organizational operations. Without a long-term thinking and commitment, it is not applicable. Teamwork is important for successful implementation of re-engineering in academic libraries. Every step of the process depends upon the constant support of the top management. Their role determines how far and how long the implementation can go. Therefore, once a decision is made to apply re-engineering in academic libraries, a strong leadership is required.

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