Reference and Information Services in the Digital Era

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Abstract: Digital era made an impact over all the library and information activities by using ICT and digital media and different techniques and technologies. The major impact is visualised in library services which are more advanced and qualitative using digital media. In the present era of IT, internet, web technology and digital media applied successfully in libraries, have shifted their way of providing services to users. The main aim in providing assistance to users by providing library services is now shifting from traditional single library to provide access to globally available information is possible. The traditional reference services are now virtual reference services using digital or electronic information resources available either free or fee based. These papers describes some of the emerging digital reference services using e-mail and web forms, text-based chats, and provide value based, user need based and services on demand instantly using different digital resources. The model for digital reference service is also explored at the end.

Keywords: Reference Services, Information services, Value added library services, digital reference service, virtual reference services, virtual reference desk, Library 2.0 based services.

1.1 Introduction:
Reference and information services are the main components of any type of library. Library and information centers are providing different types of services to their users in order to meet their information related needs and response to their queries suitably. The primary objective of the library is to enable the users to make the most effective use of information resources through library services. Reference service is a personalized library service as well as community based library service. The main role of Librarians in traditional environment was restricted to acquire, process and maintaining the collection and also provide reference services to answer all types of queries from the available collection. But now due to use of technologies and management techniques, majority of publishing industries are coming up with announcing the information published and information stored in electronic format it is possible to develop new arena in the library profession in providing services to users. Information retrieval system is also changing its way and the library users and researchers access to global information and retrieve the information in pinpointed and timely manner.

Digital environment in libraries have shifted their functions and services, instead of ownership of resources, sharing of resources are practiced and therefore the value to access to the information is greater than having access to physical space, this has brought change in the collection development, organisation and library services. The diverse needs of users have to be fulfilled with, timeliness, accuracy and 24X7 access is also important in new era. Due to slashing prices, technologies are affordable to a very common user and now users are searching information from their desktop and smart phones. The users can download e-journal articles, e-books on to their personal data accounts. Now due to use of Internet, online service providers assistance and aggregators, it is possible for libraries to provide better reference and information services to user community.

provide services in advanced manner. Use of the advanced media and globally shared resources librarians have to provide different qualitative library services.

1.2 Status of Library Services: An overview
Traditional library services have limitations due to mono-media (i.e. only print) and services were provided from the library's collection only. Users are not provided with global access to information. The resource sharing projects undertaken has also limitations due to print media. The services like CAS, SDI, were provided to users. But now in digital environment the drawbacks are removed as the free information transfer is possible globally and instantly. The reference service provided by any libraries was more useful to the users but the tools used were localised. The reference desk was well organised with number of reference sources including encyclopaedias, directories, dictionaries,
handbooks, almanacs, yearbooks etc. The reference librarian uses these reference tools and provide the reference services to users on demand. The main drawback was the currency of information, as the tools were not up-to-date and not economical.

In digital environment the reference and information services are more prominent. Digital reference tools, virtual reference desk, virtual reference services etc based on terminology have been developed. Since the reference tools are available free over the net, now it is possible to provide better and quick library and information services to users. The library services have been enhanced and expanded with the help of free information resources available in the environment. In addition to Internet web 2.0 tools are also being used for providing library services to users. The concept of library 2.0 is coined which serves better to users.

The changing scenario of library services are studied by many scholars and opined that a shift in nature might be witnessed shortly due to technology and digital media. The status of library services is enhancing Ramos and Abrigo (2011) pointed out that reference services in academic libraries to students and faculty members have chosen to go online and use Instant Messaging and Facebook for getting relevant information. Nooshinfard and Ziaei (2011) expressed that libraries are shifting their services due to usage of internet, web tools and the library website etc. The Library web site is an advanced media to provide better reference service by connecting different information resources and products and also becoming an important tool in marketing information products of the library and also providing digital reference services to users. Chandwani (2008) listed out two types of Digital reference services i.e. Asynchronous and Synchronous which includes E-mail reference service, web form, ask service, Virtual Reference Desk, 24/7 Reference, Instant Massaging Video Conferencing or web cam services etc. Dahibhate et al (2009) in his communication has also made an effort to list out various library and information services which can be easily provided through libraries in digital world. The authors concluded indicating that user centric or user based library services is the need of the current environment due to the information explosion, rising cost of the information resources, increasing expectations of the users form the libraries, increasing research and development activities, use of digital resources and need for specialized pinpointed information etc. The cost effective and economical aspects in the services are also the need of the present environment. The information overload is the basic problem in managing the proper information delivery to the users. Hence it is now necessary to develop the users based library services to make the maximum use of the resources available to the users. Jeevan (2007) has also listed out different library services which can be provided using technology like web based, Internet based, CD – Rom based, Network based, and Consortium based Information services, and these are purely based on the digital documents or information resources like databases-books, e-journals etc.

The Concept of digital reference service has emerged with the growth of the internet and web development. Digital reference service has been described as an assistance offered by the librarians to the users through the internet and web resources. Digital reference service allows individuals to submit questions to library staff using synchronous (real-time) or asynchronous technology. Library web pages and “webliographies” are new forms of delivery for the products of indirect reference service. Collaborative digital reference service involves multiple institutions and requires additional software support in order to route questions to the most appropriate participant. Digital reference service provides many benefits for libraries and their users. They can provide reference service 24 / 7. A librarian can provide reference service regardless of location or person using global information. Digital reference service also adds overall value to library services by extending reference service to physically challenged users who cannot visit or avail the library facilities due to varied reasons. E-learning and teaching system in education needs library services of different nature and digital reference services are getting more preferences in academic sector while completing assignments and seminars. Thus Digital Reference Services (DRS) is the need of the present era as the information resources are being made available in digital form. Faculty and students are using electronic media extensively (like mobile technology, what’s app, we chat, etc) and have good digital literacy and also put more demand to librarian for subscription to e-resources. Along with internet, social media is also playing massive role to communicate and share information among library user.

1.3 Reference Service in Digital Environment:

ICT and Internet has brought tremendous changes in information and reference services in academic libraries. Now a day’s libraries are advancing and providing services to users on Desktop PCs with using Internet connection, Intranet facilities for internal communication, LAN, WI-FI in library campus etc. Internet resources are indispensable and valuable source of information to all and used for efficient information delivery. Digital medium has offered a platform for a wide range of existing and future reference services. Libraries are now shifting from traditional practices to advanced using technologies.
Initially basic reference services provided by libraries using library management software were OPAC, holding of journals, databases of specialised material etc., made available to users. Value added information products and services provided like list of books of Addition, new journals subscription list, Title Index, Author Index CAS, SDI etc., provided using technology. Libraries are providing OPAC to others by using web (Web OPAC) and develop Library web pages and provide links to subject based links to resources available globally. Library portals and “webliographies” are new forms of delivery of information products (e-resources, newsletters, New addition holding list of books and other reading materials) that provides to indirect reference service to their users.

Using technologies and digital media following information and reference services are provided to academic users by the libraries.

1. **E-mail based reference services**: Users send the queries or requests to the librarian using E-Mail facility. Email reference service is being popular service provided by librarians today. This service do not require any additional software and from librarians point of view email based reference service is an easy to use and provide assistance at no extra cost and training is not required. Quick and ready reference services can be offered using email.

2. **Library website based services**: User at the click on button of the library website pops up to the subject based resources and gets the information required their own. A library web page is designed and provided by librarians and provided links to different reference tools and databases which provide both short and long range services to the users.

3. **Ask about service**: This service allows the users to ask question on line and received answers for free, from public information location mainly on the www. e.g. Ask ERIC (http://askeric.org), Ask A Question (http://talonline.ca/askaquestion), Ask Me (www.askme.com) etc are few notable sites from where users can get specified information from the experts in the field.

4. **Chat Reference Service**: In this service a reference librarian and the user can communicate with each other using short text massages in real time by using normal chat software e.g. WHATS App, WE CHAT, VIBER, BBM. and gets clarification of the complex question asked by users and try to solve instantly by using different resources. this service software also allows for Instant massaging (IM ) and also allows collaborative browsing between the librarian and the user.

5. **Video Conferencing / web camera reference service**: In this reference service librarian and user are able to see each other e.g. Skype, Hangout etc. The discussions with experts, meetings and online demonstrations can be made available to users.

6. **Global digital reference service**: In this service questions can be send electronically and answered by any reference librarian in any other country instantly.

7. **FAQ (Frequency asked question)**: In this service users can get response to standard queries information about the organisation their services, activities and progress etc.

8. **Ask-a-Librarian**: This is also an e-mail based online or off-line based service. User can ask a question to the librarian and librarian using different tools find the answer and respond to user. Many libraries are providing this type of reference service to users.

9. **Social networking based services**: In this service librarian are using social media tools for sharing information and distributing educational resources to users, e.g. facebook.com, slideshare.com, lislink, twitter, etc.

10. **Mobile based services**: In this service librarian are using smart phone for Q. R. Code services (Quick Responses Code), Mobile wiki, mobile dictionaries, Web-OPAC etc for sharing and distribution of information to the users.

11. Dahibhate and Karambelkar (2013) also listed out library services which can be provided using outsourcing, crowdsourcing, Internet / web resource based services, digital library based services, social network and cloud based library services. Thus digital resources made revolutionary changes in providing library and information services to users more effectively from wide ranges of globally distributed resources.

The authors have summarised the digital reference services in the diagram 1.1.
1.4. Best Practices:

To manage better services using technology it is necessary to follow best practices and few of them could be: (Dahibhate and Karambelkar 2013)

- Develop modern library system using more powerful technological tools and also develop library website with social networking sites like Facebook, Blog, RSS feeds, etc which can give access to library resources
- Ask librarian service to respond to active reference service
- Awareness of information literacy amongst staff and students through orientation.
- Support to e-publications and procure e-book readers like kindle for users
- Capacity building and acceptance of new skills
- Information seeking studies at regular intervals to assess the need of the users
- Development of specialized databases, and institutional repositories
- Provide user orientation for accessing information from remote places or available in institution.
- Provide value added information services using digital information and different resources

1.5. Role of Librarians in Digital Era:

The librarian’s responsibilities are increasing, due to technological adaptations in libraries and have to perform different roles. (Dahibhate and Karambelkar 2013)

- Act as e-content aggregator
- be a e-publisher and e-content manager
- access to local, internal and international information available in different forms
- Selection and evaluation of e-resources and databases before search and subscribe.
- Develop library web page, library portal and subject gateways and provide links of different resources
- Provide user orientation for accessing information from remote places or available in institution.
- Provide value added information services using digital information and different resources

1.6. Future Libraries:

The libraries of the future have to serve as a nerve center to society and information community and provide information through digital data streams. Libraries become information search centers, where information experts assist users in real and virtual information environment. Library may act as information scanner, information processor or even as information café or book downloading unit. The professionals working in this environment have to be information and technology literate and provide better information services to users as information searching techniques may be complicated due to nature of production of information resources and provide information services with enhanced features.

CONCLUSION

Growth and development of ICT has brought tremendous changes in information and reference services in academic libraries. Digital reference services i.e. Asynchronous and Synchronous which includes E-mail reference service, web form, ask service, Virtual Reference Desk, 24/7 Reference, Instant Massaging Video Conferencing or web cam services etc are becoming more popular and also provided efficiently. In addition to these web based, Internet based, CD–Rom based, Network based, and Consortium based Information services, are purely based on the digital documents or information resources like databases, e-books, e-journals etc.

Synchronous communication, content delivery, collaborative publishing tools, collaborative service platforms and hybrid applications are changing the library services structure. Academic libraries are becoming research centers and have to provide various services as per demands to users. The best practices to be followed and capacity building in the profession is the need to sustain in future.
REFERENCE:


Other References Consulted:


