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# DIGITAL REFERENCE SERVICES IN THE WEB BASED INFORMATION WORLD

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## Abstract

*Reference service has long been a cornerstone of the library profession and the development of Internet brings libraries new modes of communication and outreach and has extended the scope of reference service to Digital or Virtual Reference services to the users across the world. An attempt has been made to notify the significance of Digital reference Services in the Internet world and suggests the criteria Planning and implementing Digital Reference Services in an academic and research world. Further, the Web-based reference services, which could be used by the libraries are compiled and concludes with challenges of system of Digital Reference Services.*

**Keywords:** Digital Reference Service, Virtual Reference Service, Information Services

## 1. Introduction

Reference services are a well established part of traditional library environment, the provision of reference service in the digital realm is still very much in a formative stage especially due to the advent of Internet technology. According to Peters (2000)<sup>1</sup> makes an analogy between the evolution of traditional library services and the development of digital library services by observing that in both cases initial interest centered on the provision of collections. Once these were somewhat in place, the provision of document surrogates became the centre of attention. Only after these issues began to be addressed did interest in services begin to move centre field. In this vein, it appears that discussion and experimentation with library services in the digital realm has begun, but there are still many issues, both practical and theoretical that must be addressed to understand what the issues and needs are and to create true state-of-art services that meet user needs and can be professionally planned for, managed and evaluated.

Digital reference replicates in the digital library environment what is most valued in the physical, especially public, environment: personalized guidance in the gathering and selection of the best resources. Although this new type of service poses a challenge to more traditional public library service delivery, successful integration of the new and old models will provide users with the consistent support necessary in navigating the digital environment. Although there has been greater impact of Information and Communication technology of libraries especially in India, still majority of academic libraries are still in the process of Library automation with respect to automating their in-house activities and services mainly OPAC. Computerization of Circulation activity is still not much carried away in these types of libraries. In this context, the concept of Digital Reference Service seems to be still at primitive stage in Indian context. However, with the introduction of UGC Infonet facility to the universities in India has given a new dimension to the academic librarians in the country to think of Virtual Reference Services, which is used synonymous with Digital Reference Service.

## 2. Digital Reference Services (DRS)

Digital reference, also called virtual reference and online reference, is a relatively new addition to library services that is gaining wide-popularity in public and academic libraries. Reference librarians encounter a wide variety of information queries, depending on their user populations and the type of libraries in

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which they work. Nevertheless, reference librarians in all library settings should be prepared to assist patrons who need information. Furthermore, given the rapid development of virtual reference services such as e-mail and chat, reference librarians need to be ready to fulfill information requests in the online environment, and not just at the reference desk.

Digital reference refers to a network of expertise, intermediation and resources placed at the disposal of someone seeking answers in an online environment. Digital reference can provide support for users who find online tools and resources unfamiliar, difficult to learn, or insufficient to answer their information needs. It can also provide valuable user feedback to collection builders so that they may better tailor their resources and maximize their investment in content creation<sup>2</sup>

### **3. Planning and Modes of Digital Reference Service**

The criteria that should be kept in mind while rendering Digital Reference Services to the users are

- Establishing a User-Centered Service Model that Balances Centralization and Decentralization and should understand and analyze the information needs of users.
- The coordination between the Librarian, faculty and users needs to be integrated to achieve subject-domain expertise.
- Better understanding and agreement across the organization that a significant amount of reference activity will continue to transpire directly between librarians and users, but that subject specialists will anticipate and be prepared to respond to inquiries through the central service.
- The DRS is a continuous activity and has to be framed keeping in view of the long run towards goals of academic pursuit.
- A Strong IT infrastructure is a basic necessity with campus network of high bandwidth. The physical service location in a public service area and Virtual service location of server space with proper maintenance has to be worked out i.e. hardware and software PC/Workstation; printer; scanner; mail client; web-form; chat software; authentication software; etc.
- As a reference expertise in the virtual environ, the library staff participating in virtual reference service need to have a clear understanding of the software/information technology being used to support operations, and the specific goals, policies and guidelines for service. Therefore training in advanced web skills, reference interview and procedure; programming and web expertise are required.
- Ensure quality control as a basic standard for researching questions; types of sources used; structured response; referrals to other resources or services etc. The most fundamental way to ensure that digital reference service is consistently excellent is to define realistic service goals, accompanied by workable policies and procedures, with participating staff fully cognizant and invested in them.

Digital reference service models can be organized either in a asynchronous mode wherein the transactions involve a time delay between the question and answer and synchronous mode with instant answers to a query.

## E-mail

E-Mail is most preferred means of communication in responding to user's reference queries as it is widely available and does not require extra software. Users can either click directly on the e-mail address on the library web page which activates email software, or send a message to the email address using their own software.

## Web Forms

On par with E-mail, instead of sending mail directly, the users need to fill up the their query on the Web form like Ask A Librarian from a designated web site, where users must respond to specific queries in addition to asking their questions. Users must click on a button specifically designated for that purpose and after receipt of the form, the librarian will respond.

## Chatting for Information query

This is the advanced method of answering to the reference queries instantly in the Internet world. The transaction involves a split web screen: in one screen users type questions and can instantly see librarians' responses; in the second screen, librarians can call up web pages or other electronic references where the required information can be found. Although chat reference is associated with the 24/7 service model, this level of service is often impossible for single libraries to implement. Chat reference software like Yahoo Messenger or higher dedicated software's in the web environ may be stored locally on a library authority server (Figure 1).

## Video-conferencing or web-cam services

This is an improved form of *Chatting* with visual element where the librarian and user can see each other and exchange their queries. Librarians and users are able to use both text and speech for reference transactions. Instead of a window for the textual exchange, there is a window in which librarians and users can see each other while conducting a face-to-face interview (Figure 1).

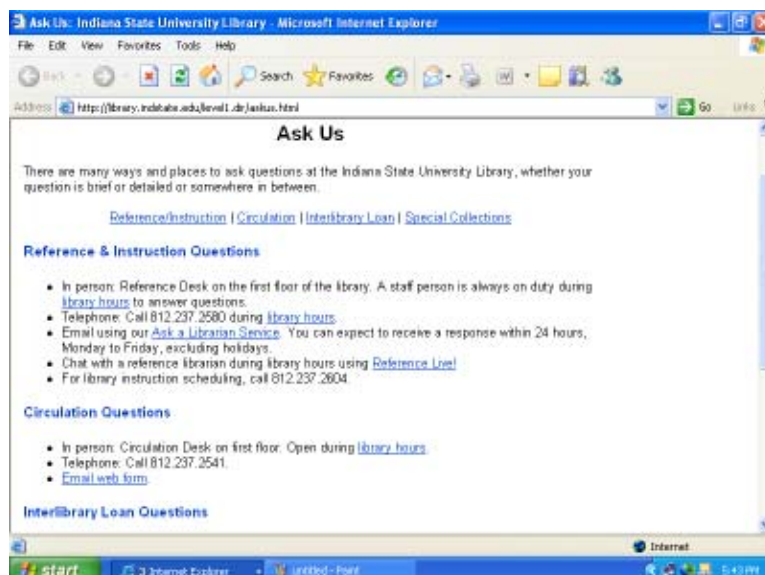


Figure 1: Digital Reference Service at Indiana State University Library

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#### **4. Current Trends in DRS**

The Library of Congress' Collaborative Digital Reference Service (CDRS) pilot, for example, explored the growth of cooperative systems worldwide in 1998. In 2002, Question Point—a collaborative effort from the Library of Congress (LC) and OCLC Online Computer Library Center, Inc. (OCLC) became the next generation of the CDRS<sup>3</sup>

##### **4.1 Reference and Information Services on the Web**

A number of web-based reference and information services are available free of charge and small fee basis. Following are some of the web-based reference services, which could be used by the libraries.

1. AllExperts - (All subjects available free).
2. Askme - (All subjects available free).
3. Find/SVP - (Business - Fee based).
4. LiveAdvice.Com - (All subjects - Fee based).
5. Professional City - (Law, Accounting, Marketing - Fee based).
6. The Internet Public Library ([www.ipl.org](http://www.ipl.org)).
7. Information Please ([www.infoplease.com](http://www.infoplease.com)).
8. Britannica ([www.britannica.com](http://www.britannica.com)).
9. Bartleby Reference ([www.bartleby.com/reference](http://www.bartleby.com/reference)).
10. The Internet Library for Librarians ([www.itcompany.com/info retriever/](http://www.itcompany.com/info retriever/)).
11. Reference Desk ([www.referencedesk.org/](http://www.referencedesk.org/)).
12. The Electric Library (<http://ask.elibrary.com/redesk.asp>).
13. Mediaeater Reference Desk ([www.mediaeater.com/easy-access/ref.html](http://www.mediaeater.com/easy-access/ref.html)).
14. Xrefer ([www.xrefer.com/](http://www.xrefer.com/)).

##### **4.2 Search Engine Reference Services**

Ask Jeeves ([www.askjeeves.co.uk](http://www.askjeeves.co.uk)) is basically a search engine. Ask Jeeves, a web based information service is quite useful for introducing reference services in digital libraries. Users can ask a question and get an answer right away or ask a question on a given topic. Then Ask Jeeves comes up with a list of questions on the same or similar topics; the user can select any of those predefined questions and Ask Jeeves provides further answers. This is an interesting service and may be considered a useful model for reference and information services in digital libraries.

In addition to Ask Jeeves, "The Electric Library" is an excellent choice for a serious researcher in need of timely content from a wide array of otherwise unavailable sources and "Information please" is a tool for students and other researchers as an authoritative sources of facts and pointers for further investigation.

##### **4.3 Digital Reference Services and Libraries**

Some libraries have now begun to offer web based reference services and a number of projects have been initiated. Some of such services available now are –

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- Ask a Librarian ([www.earl.org.uk/ask/](http://www.earl.org.uk/ask/)) a web based reference service primary design for UK residents, provided by a network of public libraries. E.mail response is sent by one of the participant libraries.
  - British Library STM search service and special reference services for business, patent, scientific, technical, medical and environmental information.
  - AskA services (for academic libraries).
  - WebLine ([www.webline.com/products/web.htm](http://www.webline.com/products/web.htm)).
  - Virtual Reference Library (VRL) at Toronto Public Library.
  - CDRS ([www.loc.gov/rr/digiref/](http://www.loc.gov/rr/digiref/)). This collaborative Digital Reference Services has been launched by Library of Congress. It is a professional reference service to users, anywhere anytime, through an international, digital network of libraries.
  - Automatic Reference Librarians for the World Wide Web. ([www.fastlane.nsf.gov/servlet/showaward?award=9874759](http://www.fastlane.nsf.gov/servlet/showaward?award=9874759)). Initiated by the University of Washington. In this web based reference service, the searchable site gets a wrapper containing some assigned topics that are used for matching with the topic of user queries.
  - SIFTER (<http://sifter.indiana.edu/>) Initiated by Indiana University.
  - The Virtual Reference Desk ([www.vrd.org/](http://www.vrd.org/)) sponsored by US Department of Education. Here when users question cannot be answered by participating centre, it is forwarded to the VRD network for assign.
  - AskUs Online Reference (<http://infopoint.lib.umn.edu>) University of Minnesota Libraries offered to qualified public services staff.

## 5. Current Challenges for DRS

- An ideal Management Software that would support Web-based reference services to have asynchronous and real-time interaction and telephone and site-based, face-to-face reference and facilitate the exchange of digital content; provide centralize the environment as needed in a distributed service organization; and provide the tracking, archiving, search capability, and use-report capabilities critical for the effective management of ongoing operations. The success of realizing goal for achieving complete and seamless integration of digital reference operations largely rests on the integration of Management software of DRS.
- The casual approach of Librarians will be totally ruled out when DRS is introduced in web environ. Therefore, an exclusive reference Librarian is to be appointed to respond the queries and chat instantly all the time.
- Up-gradation of educating and training to handle the system of Digital Reference Service in using management software and responding is the basic necessity. This is the best opportunity to reveal the skilled Librarianship to explore their visibility.
- Virtual Digital reference service will invariably grow even in the absence of aggressive promotion, but the real challenge is to demonstrate effective and high-demand service for the primary user community<sup>4</sup>.
- Co-operation and coordination is very much required from all angles i.e. Cross-institutional service collaborations, commercial information service development, and the development of tools and user interface designs that foster independent use of digital content for the success of Digital reference service.

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## 6. Conclusion

Clearly, librarians, especially, but not exclusively, public librarians, must be able to take on the role of mentors, whether it be as guides in libraries at computer terminals, or as virtual guides through e-mail and chat. Incorporating digital reference as a standard service in library plans will prepare librarians in heeling the cries of an infant digital reference field, or they will be deafened by the roars of the coming reference revolution.

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