

*DEVELOPING DIGITAL REFERENCE SERVICE IN SOUTH ASIA: Challenges and Issues

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ABSTRACT

The study outlines challenges of south Asian countries (particularly India, Pakistan and Bangladesh etc) to develop Digital Reference Service (DRS) and focus on issues like language diversity, poor literacy rate and digital and information divide etc being common denominator of underdevelopment at different terrains with ethnic and cultural multiplicity. The paper analyses the features of (DRS) by scanning literature and deriving inputs from existing models, experiments and guidelines for developing DRS suitable for the region.

Keywords: Digital reference service- issues; Virtual Reference service; Reference service.

INTRODUCTION

Samuel Green wrote in his paper "Personal Relations between Librarians and Reader," in 1876 that it is essential to provide reference assistance to help users to locate information because the public is not trained to find information (Bopp & Smith, 2001). By the end of the nineteenth century, the role of the librarian had expanded to include reference service, and it has been part of the profession since then. During the period, great advances have been made in the field of librarianship and new technologies have changed the way we search and access the information and what we expect from reference service. With the introduction of ICT, libraries expanded the role of reference beyond the use of the mail, telephone, or the fax machine. However, Green's point remains still pertinent: having access to sophisticated technology and more information does not mean that users have better research and search skills because the sheer

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amount of information on the web can often be perplexing and frequently offers too much choice and selection. Web portals or gateways or Search engines alone do not help in the search for sources or hunt for information. Users looking for a swift, clear path through what's on offer require more direct assistance from information professional.

In the past fifteen years, libraries and information professionals have become both more sophisticated and more dependent on new technologies. For example, libraries migrated from card catalogs to online catalogs. With diverse changes in the profession, reference service has also changed. Today, librarians not only help patrons at the reference desk but also in cyberspace. This new type of service, called digital or virtual reference, has emerged as the result of various factors, including the advent and wide use of the Internet and the development of software capable of providing synchronous and asynchronous service.

This paper discusses issues related to establishment of digital/virtual reference in South Asian countries and mainly focuses on the issues and challenges.

SCOPE

The scope of this paper is to outline issues and challenges for establishing Digital Reference Service (DRS) in South Asian countries(SAN) comprising Bangladesh, India , Pakistan , Sri-Lanka, Nepal, Maldives and Bhutan. The region being diverse in language , culture, literacy and IT density , yet having many threads to share in their geographic, historical and educational homogeneity and nature of scholarship, traditions and educational and research pattern. The paper is based on the available meager literature relevant to the region and is exploratory in nature with scope for research to probe deep in challenges, experiment, establish and develop tools and strategies for DRS and also learning from other information systems which have already excelled in the process .

DEFINITION

All professionals have an idea about what digital reference is but is represented by various terms available in literature like: *online reference*; *digital*

reference; electronic reference; virtual reference; live reference and Chat reference. Generally speaking, virtual or live reference refers to transactions in real-time, using chat and video-conferencing, for example. Online, digital, electronic reference includes e-mail and web form transactions. However, these distinctions are quite often blurred and overlap. In the context of this paper, 'digital reference' is used to include two broad components: 'it is Internet-based and designed to connect users with experts' More importantly,

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. (Minetext publications,2001)

The McConnell project (Garfield,Diane,2002) gives the short definition of digital reference as " the provision of reference service over the Internet" A new term has been considered more recently, *distributed reference services*, which captures best the notion that the modern day library, to a great degree, is a web-based learning environment. Thus in recent years, the Libraries have explored various means of providing web based assistance and instruction to our users, and have offered an email (asynchronous) reference service and provision of a digital reference service by offering personal assistance in real-time (synchronous) through the use of web based interactive software. This new chat service is often called *Ask a Librarian Live*.

Digital reference differs from traditional reference in two fundamental ways. First, there is a disconnect between the user and the physical space of the library. Second, digital reference creates artifacts of the exchange between the professional and user. That is, the transaction can execute in terms of the content of the interaction, the resources used, the time it took, the time of day it took place, the librarian involved, the general location of the user and a number of other quantifiable variables. "It's time to put a human face on the virtual library....The human factor is still Important."(Technology, 2002) To address these realities, the Libraries have developed a number of proactive, innovative

and flexible approaches to providing reference services. In addition to email reference, the Library offers online library research tutorials, web-based subject guides, an FAQ page, and a telephone.

A digital reference transaction will usually include the following elements:

- The user
- The interface (web form; e-mail; chat; video etc.)
- Electronic resources (including electronic or CD-based resources; web resources; local digitized material etc), as well as print resources
- The information Professional

LITERATURE REVIEW

The literature on virtual reference is blowing up as evidenced by the number of items added to an online 'digital reference service bibliography' (Sloan, 2003). While e-mail reference services have been available at some libraries since the mid-1980s, the number of users of e-mail reference has been limited (Goetsch, Sowers and Todd, 1999; Gray, 2000). Until 1999, most libraries reported quite low use, though anecdotal evidence, reported on the **Dig Ref discussion list(2007)**, suggests that use of e-mail reference services has been holding its own and even growing in the last three or four years. Beginning in the late 1990s (Sloan, 2001), real time chat services have been introduced to either supplement or replace existing e-mail reference services at a number of public and academic (college and university) libraries. The Association of Research Libraries (Ronan & Turner, 2003) surveyed its members in 2002; of the 62 (53%) respondents, 54% reported that they offered chat services. According to the literature reviewed, the use of such services is not high. Ruppel and Fagan (2002) report 9.5 questions per day. Sears (2001) indicates 9.6 chat sessions per week, while Kibbee, Ward and amp (2002) had 'over 600' transcripts for a twelve-week period. The number of hours such services are open will, of course, affect the number of questions received. Because of improved software capabilities and the popularity of chat technology with younger users, it is anticipated that the use of this type of electronic service will grow quickly (Breeding, 2001; Francoeur, 2000

ISSUES AND CHALLENGES

Planning

Although there are various models of digital reference, they share common elements. In adopting any one of the service options, planning should include consideration of the following as drafted by IFLA for promotion of DRS (IFLA Reference Guidelines).

- Physical service location (in a public service area; in a special collections area; in an office; proximity to print resources etc)
- Virtual service location (server space; Internet Service Provider etc)
- Training in advanced web skills, reference interview and procedure
- Programming and web expertise (web design skills; database management etc.)
- Management and co-ordination of the service (who does what when)
- Completion time for transactions (questions will be answered in a day/two days/a week etc.)
- Quality control (basic standard for researching questions; types of sources used; structured response; referrals to other resources or services etc.)
- Service population (whether service is available for local library users or anyone)
- Data collection for evaluation
- Promotion of the service
- Hardware and software (PC/Workstation; printer; scanner; mail client; web-form; chat software; authentication software; etc.)
- Additional equipment (web cam; video equipment etc.)
- Furniture

The staff necessary to run such a service includes:

- Researchers (librarians; library assistants) to gather the information to answer questions
- A co-ordinator to assign questions and to monitor answers; to schedule staff
- IT support for running networks, maintaining web pages and scripts

- Data entry staff to input and send responses.

Service Delivery Models

Digital reference service models can be divided into two broad categories:

I. Asynchronous transactions

The asynchronous transaction involves a time delay between the question and answer, such as with e-mail based services.

E-mail

This is still the major format for online information delivery. E-mail reference services come in two basic varieties: basic e-mail and web forms. Common practice for basic e-mail service in UK public libraries involves an email address specifically designated for the reference or information service (e.g. libref@publiclibrary.gov.uk). 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.

E-Mail is still the most popular form of communication from users' perspectives for different reasons beyond the scope the page. From the librarian's perspective, a plain e-mail based service is easy to implement, requiring no extra software and no extra training on the software.

Web Forms

Web form transactions as found within the UK public library service, Ask A Librarian, can only be initiated from a designated web site, where users must respond to specific queries in addition to asking their questions. In order to send the form, which will usually be received by the library in the form of e-mail, users must click on a button specifically designated for that purpose. Web forms can be useful to librarians and users alike in that they provide a structured format for asking questions. Librarians not only can guide users in framing questions, but also gather information important for service evaluation.

II. Synchronous transactions

The synchronous transaction takes place in 'real-time' with an immediate response to the query, such as can be found in chat-based services.

Text-based chat

Chat or Instant Messaging is where librarians and users can 'speak' to each other in real time on the Internet using special text-based software. An example is the Live Help service by Gateshead public libraries (Fig.1).

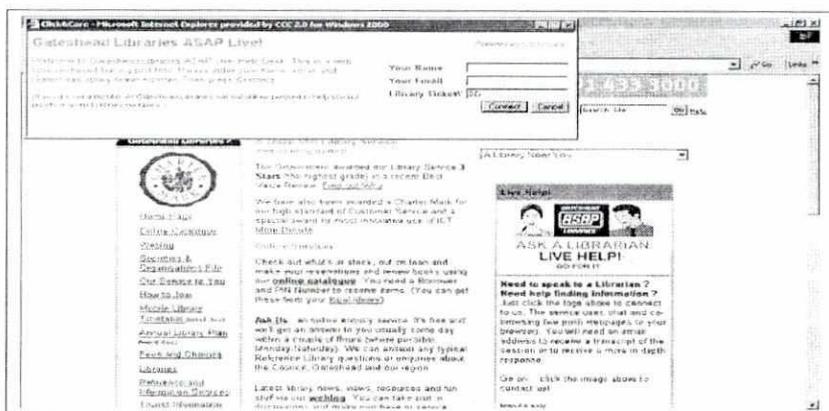


Fig 1.ASK A Librarian (Live help at Gateshead library Interface)
<http://www.gateshead.gov.uk/libraries/>

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. Usually, the service will be offered at specifically designated times throughout the working day. The 24/7 service model is more easily delivered through collaborative services, such as southern California's QandA Café (2007). In addition, suppliers, such as LSSI with their Virtual Reference Toolkit Library Systems and Services (2007), offer supplementary support for answering questions outside the hours of library service.

Chat reference software, which can be stored locally on a library authority server or remotely on a supplier's server; Escorting users/staff members through web searches ,Distance learning sessions; including virtually training users or

staff members in Internet searching; Conducting on-line meetings for staff; Queuing of users and having files with users/staff members etc.

Because of the customised software and immediate nature of the transaction, chat reference initially makes more demands on the library resources.

Video-conferencing or web-cam services

This form of digital reference includes the visual element, which may be a partial solution to the communications problems inherent in the more text-based services. 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. Web or other electronic sources can 'be pushed' to users via another window. This technology provides distance learning, as well as research and reference applications; examples of the range of uses can be found in university libraries, such as the Off-Campus Library Services, University Libraries, **(University of Tennessee, 2007)**

Challenges with this type of service are similar to those with chat reference like Staffing ,Training ,Times for implementing the service,Lack of mobility for staff involved with the service (a librarian must remain at the terminal for the time allotted) andCost

Digital Reference Robots

Digital Reference Robots essentially use artificial intelligence to respond to questions; the most well-known of this type of service is **Ask Jeeves (2007)**. In addition, the Open University Library, through its OPAL project, is working towards developing an "artificial librarian]" (**Open University Library ,2007**). Such services work through software that searches databases of questions and answers, otherwise technically are termed as knowledge bases.

Specific Issues for S.Asia

Level of literacy and digital divide

Literacy rate of South Asian Nations is not encouraging and thus DRS may not be acceptable on large scale and shall take some time to take off. Digital

divide is also putting SAN on the other end of the river because of its less digital literacy, comfort, web connectivity and allied infrastructure. These factors serve impediments in smooth drive of the DRS.

Lingua Franca

The diversity of languages spoken in SAN is a major issue. People speak, write and learn mainly through Aryan and Dravidian family languages besides English. India alone has 1652 mother tongues in fashion and Hindi is not alone becoming digital dialect and it is true for Pakistan where Urdu, Punjabi and Sindhi has to struggle for scholarship, popularity and digital survival. The other nations may have some homogeneity, yet have different linguistic identity. The languages varies after every hundred kilometers and adds to major problems in development of chat, interface and access in DRS. It demands new experiments for development of interfaces, dialogues and resources for a successful and people oriented DRS.

Intellectual property rights

Intellectual property rights regulations and its judicious implementation is a practical challenge in most countries especially in cyberspace but it has different connotation in SAN, as scholars and government are less concerned with right and duties of authors and other stake holders. Therefore, DRS providers have to be more vigilant in providing information and literature in positive manner so that it may not become a unending chain of copying law infringement, pasting and copying mechanism for a group of easy-goers.

Consortia Culture

The basic problem with SAN is surfacing of consortia culture, which have been limited to certain commercial or institutional e- Journal consortia or Repositories. However, certain networks have evolved with a different focus, though these have been changing their objectives with development in technology but couldn't deliver stuff, perhaps their lopsided collection development policy or failed to tailor or customize the services for the region or Country specific needs. With this lacunae in their growth, these couldn't keep up themselves to provide DRS. We still have to depend on foreign sources,

OPACS, search engine to provide services or even develop high end connectivity or cooperation with foreign institutions for provision of reference service. The later can prove fruitful but the cost factor may be a big impediment at later stage.

Economics

The value of information, its packaging, access and delivery mechanism cost is important for the socio economic development of the country but equally important is to afford it by one and all for developing nations where there are major problems of meeting the basic amenities of life and will have to depend still on traditional tools and strategies. One solution will be to develop more cooperative efforts for resource sharing, joint ventures and consortia efforts for developing Knowledge, reference and referral databases.

Knowledge Base

South Asian Nations lack genesis and development of Digital Libraries on a good and large number perhaps less Government and private or NGO initiatives unlike western countries. The digital Libraries reported from India does not exceed more than a dozen in academic set up and doesn't have rich and up-to-date content.

The databases are emerging but access to them is limited due to license agreement etc E- repositories are also n emerging and may help to serve as cornerstone for s a wider knowledge base. The reference sources in Hindi/Urdu / Bengali are not enough, even wikipedia is not available in these languages to help to evolve a digital reference service.

Other Issues

Other major issues of concern need an attention before establishing DRS. These include the competency and skills of the supervisory and executive staff and their training for an effective service like communication and soft skills and knowledge of resources .. The policy framework is very important and development of chat and conernt building guidelines and serving procedures in vulnerable region for being sensitive from cultural ,social and religious

aspects. The mechanism of the technology adopted, software selection and development, publicity and promotion, evaluation guidelines, feedback procedures, collaboration agreements and modules also deserve some discussion for better strategy.

FUTURE

There are mixed feelings in the profession of librarianship about what the future of digital reference holds. Some librarians feel that it reference will fade away, while others think it is here to stay and will evolve. The general feeling is that digital and traditional reference services will coexist (**Straiton, 1999**). **Oder (2001)** points out that both services are needed because each provides a specific type of service. For example, questions that require more interaction and are detail-oriented are better handled in person, while ready-reference questions are better suited to chat, and questions that require longer research are best answered using e-mail. Providing this variety of reference services is important, since patrons process information in different ways. As technology becomes more sophisticated, libraries will use more and more digital reference. Users like to have access to the Internet. It is convenient and many students have practically grown up using online services. The move toward a more digital society is apparent in libraries. **Straiton (1999)** notes that as time goes by, the term "reference service" has mutated from "reference" to "reference and information service" and finally to "information systems and technology". This interest in moving toward a more technological culture is also reflected in the increased number of computers available in academic libraries, which increased 14 percent between 1994 and 1997 (**Tenopir & Ennis 1998**). As technology continues to bring new tools into our lives, digital reference must keep up with the pace. Because librarians will need to rely more and more on material found online rather than print sources, there is an urgency to convert information into digital format. Providing patrons with online resources will soon not be enough, librarians and users want more interactivity. One of the major requests made by reference librarians to vendors is to have the capability to scan material in print and send a PDF to the patron (**Kenney, 2002**). Another trend that will become more common in the future is that academic libraries will become part of larger

consortia in which information is shared among all participants (**Malinconico, 1992; Kawositz, 2001**). Beside providing around-the-clock service, libraries will be able to decrease their collections budgets and take advantage of special collections provided by other libraries. .

CONCLUSION

With the arrival of the Internet, libraries are expanding into cyberspace and are reaching out to segments of the population that otherwise would not use a library. Even though librarians must adapt to new technologies, the notion of providing reference service, first mentioned in Green's paper in 1876, will not change: reference librarians will continue need to reach out to patrons and help them find and use information. Digital reference service has introduced new opportunities as well as challenges for librarians, users, and vendors. Librarians should embrace this challenge and seek out new and improved methods to provide reference service especially in SAN.

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