

An overview of Digital Reference Services

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Abstract : Digital reference service is an emerging trend of traditional reference service. Easily accessible digital reference service has become one of the hallmark of the library and information services. The paper highlights how new visage of traditional reference service is developing as a natural solution to keep pace with comprehensive technological environment. It discusses about the basic concepts, elements of digital reference service and give in detail modes, the advantages, limitations, and some details regarding various digital reference services carried out by several libraries and commercial organisations.

1. Introduction

The primary aim of the library is to offer a variety of services to its clientele to meet their specific information requirements. Several techniques such as classification, cataloguing, shelving lists, opacs, open access to its readers and similar other types of services are all indirect form of assistance to users to find their document in the library. One of the basic objectives of every library and information centre is to save the time of the user as well as to provide specific information as quickly as possible. The method used for the same involve personal efforts to bring together user and his document. Hence this method of providing personal attention to readers in terms of meeting their specific needs is given the name 'Reference Service'.

According to Dr. S. R. Ranganathan, In the present electronic and communication environment reference service is not only confined to the library service but also to remote users. Sometimes it is termed as e reference service, Digital reference service, Virtual reference service, its main objective is to provide pin-pointed, exhaustive, expeditious service to its information seekers whenever they have a query.

In the fast changing technological era, with the advent of internet as powerful medium to provide the information round the clock i.e. 24*7. The internet with its services like e-mail, www, bulletin board services have changed the notion of traditional library into digital library and the traditional services are now called information services. To meet the quick demand of the user librarians maintains digital collection and also access e resources and provides information in digital mode. With the emergence of digital library and influence of internet, the concept of traditional reference service has transformed into Digital reference service.

To meet the information needs of the users in changing technological environment digital reference service is a natural solution which is supposed to be an advancement of the traditional reference service. Digital reference uses the internet to allow people to connect with a librarian. In the process of providing Digital reference service the reference librarian receives question via e-mail or web interface, identifies the query and then decides appropriate course of action. He analyses the request and gets the type of information required.

2. Definition

Digital reference service may be defined as “the provision of reference services involving collaboration between library user and librarian, in a computer based medium. These services can utilize various media, including e-mail, web forms, chat, video, web customer call centre software, voice over internet protocol (VoIP), etc”. [5]

According to Wikipedia[6], “Digital reference service is a service by which library reference service is conducted online and reference transaction is a computer mediated communication”.

According to Lankes[3], “Digital reference service refer to the position of human-intermediated service over digital network”

Hence we can conclude that Digital reference service is requires computer communication with digital network , should have alliance between user and the librarian.

3. Elements of Digital Reference Service-

According to Linda Berube, a digital reference service incorporates the following three basic 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

4. Modes of Digital reference service:

Based on the mode receiving and answering the queries, digital reference service can be broadly categorized into two types

Asynchronous and Synchronous

4.1 Asynchronous: This mode involves a time delay between the receiving question and providing answer such as e-mail reference service.

4.1.1 E-mail reference service – This is a simple, cheapest and cost effective service in which transaction involves back and forth exchange of information . User sends the query in the form of a message and receives an answer at a later time. User can ask a question even when the library is closed. Library give reply by e-mail, fax or phone as he finds it convenient.

Advantages

- Psychological barrier that stops shy users asking questions face to face is removed.
- Useful for the users who are poor in oral communication
- Physical boundaries are removed
- It does not require extra software and no extra training
- Reference librarian find more time to think , chalk and plan out a strategy and finally search and give the answer.
- No restrictions of working time, user can ask query any time .
- This mode of receiving and answering questions is cost-effective.

Disadvantages

- As face to face interaction is not possible, reference librarian not able to get clarification about his doubts arising in his mind after receiving the query.
- Speed of receiving and answering questions depends on the volume of e-mail traffic and communications link over the internet.
- It is difficult for reference librarian to judge the urgency of information.

Following are the some of the e-mail services provided to the users:

Inforocket

(<http://www.inforocket.com>)

It is a fee based reference service.the price per question varies from\$5 to \$75.the user can ask questions which will be answered by the experts.

Askme (<http://www.askme.com>)

It is a free service where users can ask question and enter their e-mail addresses.

All Experts

(<http://www.allexperts.com>)

It is free web based reference service where answers are provide with the help of subject experts like lawyers, doctors, engineers and scientists.

Question Point

(<http://www.question Point.org>)

This is a cooperative virtual reference service launched by the Library of Congress and OCLC, Dublin. Question Point combines an infrastructure of software and communication tools with a global network of cooperating libraries worldwide.

Britannica

(<http://www.britannica.com>)

It is free information service on the web that allows the user to search and retrieve information from Encyclopedia Britannica as well as a number of other web resources.

Besides this there are other numbers of services available where user can conduct a search for a reference query:

Infoplease	(http://www.infoplease.com)
Internet Public Library	(http://www.ipl.org)
Find/svp	(findsvp.com)
AskAunty Nolo	(http://www.nolo.com)
Reference Desk	(http://www.reference-desk.org)

4.1.2 Reference via Web

Though the email e-mail reference service is useful for readers in its own parameters. But there are several problems faced by the librarians, as it is unstructured form of service, such informal type of service do not provide sufficient details about the needs of the user. To overcome this difficulty, web for transactions were developed, as found within UK Public services, Ask A Librarian website which provide a structured web form where user must have to respond to specific queries, in addition, to asking their questions. The web form has to be accessed from library home page or reference web page. The fields then have to be filled in by the user and finally the form is sent back to the library through e-mail. Answers usually provided by e-mail, phone/post. The web form usually includes several categories for example, personal and contact details, several optional fields which after filled in by the user, remove the confusion of the reference librarian to the some extent. This web form is useful for reference librarian as well as users as it provide structured format for questions. The form should be constructed carefully so that it should not frustrate or give stress to the user while filling up the fields specified in it.

4.2 Synchronous

This transaction takes place in 'Real-Time' with an immediate response to the query i.e. the interaction between the user and reference librarian is live therefore it is also called Real-Time Digital Reference Service.

4.2.1 Text based Chat/Instant messaging – This service is a supplement to the e-mail reference service as the exchange of information between the the user and reference librarian is live (takes place in real time). To answer the questions online , the same criteria is followed as it is followed at the reference desk. Librarians who work with digital reference tend to prefer web based or electronic sources because these sources are easier to access and share with the user. Most of the user now days want to access online, full text sources. An example is the Live Help service offered by Gates head public libraries, which uses Swiss software, Click and care. The 1st step in asking questions in chat reference service is for the user to complete the log-in screen. After the question has been sent, software modifies all of the librarians who are available online and after monitoring the queue, the first available librarian answers the question. Several libraries ask for the identification no. as they offer the service to their institutional members only.

Reference librarian can use variety of tools such software with the ability to co-browse, prewritten messages, typical greetings, sign off texts to save time and typing involved in reference interview.

Reference librarian should develop skill to keep the interview short to prevent the system from logging off and users from getting bored while giving basic information. This could be taken as challenge by the reference librarian since average time of an interview in digital setting is ten minutes.

This service is gaining more importance due to several **features** such as

- User query is solved in real-time i. e. interaction between the user and the reference librarian is live.
- Speed of this service is faster than e-mail service ,so user does not have to wait for the response
- Clarification can be sought online
- This service can be offered any time(24/7 basis).
- Reference librarian can attend multiple users simultaneously.
- Voice over Internet Protocol (VoIP) can be used by reference librarian to talk to users and hear them while connected and while locating the resources.
- If the user finds difficulty in finding information from any particular resource, reference librarian can demonstrate, how to use the particular resource.
- Instant messaging needs software products such as AOL Instant Messenger and ICQ which must be downloaded on both librarians and patrons computer. These products allow librarians to communicate with the patrons in real time.

Disadvantages

- Typing speed and errors occurring during typing text may cause difficulty in communicating proper message between user and the reference librarian.
- User needs to type the complete question and reference librarian need to answer in typed format (depends on the speed and efficiency of both in typing).
- May be stressful for the user to wait for the answer every time.
- Reference librarian while busy answering several questions at a time, may not attend urgently needed questions.
- In developing countries technology is at premature stage, therefore need of this service is yet to be recognized.
- It is a labour-intensive service.

4.2.2 Video Conferencing or web cam services - Video Conferencing is introduced as a remedy to the communication problems inherent in text based services. This digital form include visual elements where user and librarian both can use text and speech transactions and they can and hear each other jus similar to face to face interview. This service is useful in distance learning, research and reference applications,can be found in off-campus library services of University libraries.

4.2.3 Digital Reference Robots – An artificial intelligence is used to response the questions when the reference librarian is not available, is known as Digital Robots. The most well-known of this type of service is Ask Jeeves. The operation of this service involves use of software to search the database of questions and answers.

Some of the well known examples of real time references are:

5. Collaborative Digital Reference Service (CDRS)

This is a free reference service project of Library of Congress and more than 100 partner libraries form various countries.

The mission of this collaborative venture is to provide professional reference service to the users at any time and anywhere through an international digital network of libraries and information centers. It is a world wide network of libraries in which OCLC builds and maintains a database which include three main components - first, Member Profiles(contain information on strength and features of members); second, Request Manager (software for entering, routing and answering reference questions; third, Knowledge Base(a searchable database for questions and answers for future use.

It supports reference efforts by combining the power of resources and manpower with diversity and availability of libraries and librarians anywhere.

6. 24/7 Reference

A pilot network established in California, Los Angeles and Orange County areas to provide real time reference services directly to the library patrons over the internet.

It can be used to :

- Communicate with users real time chat.
- Customize the software to integrate with participant library's website
- Send files, images, power point presentations to patron's computer
- Network with others by transferring complex to a local or remote expert

7. Virtual Reference Desk

<http://www.vrd.org>

This project is sponsored by US Department of Education. The VRD does not actually answer questions, but provides resources and links to experts that offer these services. It allows co-browsing, webpage sending, text message, slide shows, chat transferring. It organizes conferences on on digital reference issues for information professionals in libraries and other contexts.

Beside the above there are other projects like AskERIC, the Internet Public Library, the MAD Scientist Network are also in operation.

8. Evaluation of Digital reference services

To evaluate means to assess the quality means to judge the standard of the service that should be provided to the users. Library and Information Centers being non-profit organizations evaluate their services to know its significance for the user as well as to measure the user satisfaction. Additionally, evaluation also provide an opportunity to review the economic costs associated in providing the digital reference service as well as staffing and training issues and over all impact of the services on the reference department. Digital Reference Services should evaluate their services their policies and procedures on a regular basis to ensure reliability, quality and efficiency of the service as well as user satisfaction with service as well. Lankes has laid down the

following measures/components for assessing the quality of digital reference services rendered by the library or information centers or organization.

- ❖ Outcome Measures – to judge the quality of answers.
- ❖ Process Measures – to measure the effectiveness and efficiency of the process.
- ❖ Economic Measures – to ensure the costing and cost-effectiveness.
- ❖ User Satisfaction – to identify the degree of satisfaction of the users.

9. Future of Digital Reference Services

With the advent of internet, a number of non-library and commercial library and information centers are have started providing digital reference services, while some are free and others need payment. A good number of reference sources i.e. encyclopedias, dictionaries, thesauri, handbooks, directories and major abstracting services like Chemical Abstracts, Biological Abstracts etc. are available on the internet. Thus, in the future users will be more dependent on the online sources and services. They will tap the required information at home by means of computer. At the same time the cost involved will be affordable for the users and will continue to get the information at the less cost from the library. There will be a great demand for accurate and specific information. So, expert reference librarians will be needed in the future. As no library can provide reference service through its own collection there will be a need to have collaborative ventures for reference service. The future of reference service will be based on digital collections and communication links through web. Whatever shapes the new technology is going to take in the future library and information centers should turn their thought to compete in the new environment to provide real time reference services, specially developing countries like India needs to give a thought over it. The reference librarian and reference service in the future is going to act as a center of universe of information, if the library is well equipped with computer, internet and CD-ROM's.

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