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Digital Reference Services in the Information Communication Technology (ICT) based Environment: A Study

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Abstract: The digital reference service refers to the task of providing assistance to the library users in fulfilling their various information needs. The digital reference services has become an important part and parcel of the library services in the changing technological environment. The paper is an attempt to provide an overview of the digital reference services in libraries in the present day world.

Key words: Digital reference services, information communication technology (ICT)

Introduction: Digital reference service is the provision of the personal assistance of librarian to users involving collaboration between library users and librarian in a computer based medium. It includes the utilization of various media including e-mail, web forums, video chats etc.

The first and the foremost objective of the library is to provide various types of services to users in order to meet their various information needs..The various types of library operations including classification, cataloguing, shelving, maintenance, serial control etc. are carried out to assist the users so that they can find the pertinent information with ease that too in least possible time. In the same scenario the task of providing personal assistance to users for satisfying their information needs refers to the reference service. Now a days in modern

ICT based environment the reference service is not confined to only providing personal assistance to users but providing information services to the users/remote users whenever & wherever they need it and that too digitally available at their fingertips.(Chandwani, 2018)

Scope: The scope of the study is confined to the digital reference services in the present ICT based environment.

Methodology: A review based method was adopted for gathering of the required data necessary for the completion of the study. The literature search was carried out and the previous literature available on the digital reference services was thoroughly studied, reviewed & presented.

Objectives: The objectives of the study are enlisted below:

1 To provide an overview of the digital reference services

2 To study the importance of the digital reference services in libraries in ICT based environment.

Discussion:

Introduction

The terms "virtual reference," "digital reference," "e-reference," "Internet information services," "live reference" and "real-time

reference" are used interchangeably to describe reference services that utilize computer technology in some way.

Digital reference (or virtual reference) service is a service by which a library reference service is provided online and the reference transaction is a computer-mediated communication between the user and the librarian.**(Digital reference, 2018)**

Digital Reference is a service that provides users with answers to questions in a computer mediated environment.

Digital reference refers to a network of expertise, intermediation and resources put at the disposal of a person seeking answers in an online environment.

Digital Reference Services are Internet based services that employ human experts or intermediaries to provide information to users.

 The terms "electronic reference" and virtual reference are often used synonymously with "digital reference", although virtual reference limitless by distance and physical space. In other context it is the "Contact between the right user and right information at the right time and in right personal way through electronic media". Virtual Reference work includes the direct personal aid within a virtual library to persons in search of information for whatever purpose & especially designed for

making information as easily available as possible to users. **(Arya & Mishra, 2012)**

Elements of Reference Service

There are three basic elements of the reference service:

- The user
- Information or Knowledge base
- Informational professional/librarian
- Electronic resources(including web resources,CD based resources & other digitized materials

Types of Reference Services

There are two types of Digital/Virtual reference services:

1 Asynchronous Virtual Reference Service: It is a type of virtual reference service in which user/patron/client submits a question and the librarian responds after some time. In other words there is a time delay between the question being posed by the user and the answer being given by the librarian. Asynchronous virtual reference service takes the form of the following:

1.1 **Email reference service:**In this type of reference service a user sends a request in the form of email to librarian or specifically designed reference email Id by reference service

section of the library. The user specifies his/her specific information need in the email. The librarian responds to the query accordingly. This is the simple, cheap & cost effective method of virtual reference service. Email reference service is the most widely service used among users as users can pose a question even if library is closed & it doesn't require any additional software to use the service. This service is available free of cost and no additional effort is required on the part of the librarian to implement the service. The email reference service is very much useful for the users have poor oral communications skill

1.2 Reference Through Web: It is evident that even though the e-mail reference service is beneficial for users in its own way but there are several shortcomings of the service & the information professionals face a lot of problems as it is not a structured form of service. It does not provide complete details regarding the information needed by the user.In this regard new innovative technologies have been developed to add additional features to the service. Likewise Ask a librarian website has been framed out which is designed to provide a structured web form where user is asked to reciprocate to particular queries, in addition to their information needs. The web based form has to be accessed from library home page or reference web page. The required fields then have to filled in by the user and ultimately the form is reverted back to the library through e-mail.web

forums are created for digital reference services to help the users to be more productive to ask their queries.

2 Synchronous:In synchronous digital reference service the exchange of information takes place in 'real time'with an immediate response to the question.In this case there is a live interaction between the user and the reference librarian.It is therefore called as real-time digital reference service.

2.1 Chat using instant messaging: Instant messaging or online chat is one of the most common forms of web communication. It is more instant than an email reference service. The exchange of information between user and reference librarian takes place in real time i.e there is live communication between user and the reference librarian. In this case same scenario is adopted to answer the question as in real reference desk. The digital reference librarian prefer web based electronic resources or electronic resources as these sources are easy to access, easy to keep & easy to share with the users. Speed of this service is faster than e-mail service as the users do not need to wait for the response. This service can be offered round the clock. Reference librarian tries to keep the interaction short to prevent the system from logging off and users from getting bored while introducing themselves. This should be taken into consideration by the reference librarian since average time of an interview in

digital setting is ten minutes. Also this service needs an instant messaging software to be installed on the users & librarians desktop to communicate with each other.

2.2 Video based reference service/video conferencing/web camera service: It is a video based virtual reference service. It is also called as video help. It was introduced to overcome the communication problems inculcated in text based services. This mode of communication involves visual elements where the reference librarian and the user can use both text and voice transactions & they can see & hear each other in the same manner as in face to face interview.Video conferencing is useful in distance learning, online lectures, research and reference applications. It is also useful in off campus library services of university libraries. Now a days viva voce examinations & interviews are conducted via video conferencing.

2.3 Digital/Virtual   Reference Robots :It is an artificial intelligence based service & is used to respond the questions during the unavailability of the reference librarian.The service involves the use of software to search the databases.

(Chandwani,2018)

Implementation & maintenance of Digital reference service

1. **Staff Training:** Staff training includes the virtual reference training. The library staff is being trained regarding the fundamentals of virtual reference services & the means by which it is provided to users.

2. **Recruting new librarians:** The new recruitments are made in the libraries taking into consideration the new comers which possess extra ordinary skills in terms of providing digital reference services.

3. **Interface Design:** Interface design or an online reference desk is designed to allow the users to access various resources. The interface allows to provide expertise to greater number of people irrespective of their language, technical capabilities & physical impediments.

4. **Prototype**: Creating & Testing the Service
   Virtual/digital reference service need to be pre-tested before final implementation and making it available to users.

5. **Legal Issues:** It is mandatory for all information professionals to familiarize themselves with the current state of public information legislation in their state and when & where it affects the scope of digital reference services offered to share the information with their users.

Methods of evaluation of Digital/Virtual Reference Service

The evaluation of the service is an essential and necessary step in making the service a boon in the digital era. There are various methods of evaluation of digital reference service. They include

User feedback: The users are asked to give their feedbacks regarding the digital reference service provided by the library.

Rating: The faculty members and staff are asked to give ratings to the services provided by the library and accordingly we can evaluate a service.

Survey and Questionnaire: Survey by means of collecting data through questionnaires is also used as a method of evaluating digital reference service.

Interviews: Interview method can also be used to evaluate a particular digital reference service.

Case Studies: Case studies can also be used as an effective method of evaluating digital reference service.**(R. Shimray, 2018)**

Conclusion: Digital reference services form a backbone of the information services in the libraries. They have transformed the entire skeleton of the reference services. The digital reference service has proved to be an efficient information service in the present digital era serving the users to their expectations.

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