



Reference Services and the Library of the Future: Post-Covid19 Realities

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Abstract

The main aim of this article is to look at the nexus between reference service and the library of the future particularly as influenced by the realities of Covid19 pandemic. The reference service and the role that the reference librarian plays are two major components of the library services. The reference service also seems to be a personalized service because of the close relationship between the reference librarian and the patrons (library users) in terms of the ready query and administrative query and several other services provided by the section. Since the emergence of the Internet which has brought about the digital library and virtual library in which direct services can be provided. The pertinent question that emerges is whether there is still need for the reference services. This paper, therefore, examined the digital reference service amid digital amid COVID-19 pandemic. Also examined is the virtual library, the nature of the virtual library service with its components and the roles it plays. Relevant literature were consulted to get related scholarly materials. The reference service was exhaustively broken down particularly focusing on the important functions the reference librarian plays and the necessary skill needed to function adequately. This is bearing in mind that the reference service is the future of the overall library endeavours regardless of how modernized the world will be. With the bulk of information generated hourly that may lead to information overload, the reference service will forever remain relevant even in post-COVID19 era when it is expected more library services will move online. The finding shows the evolution of the reference service is slow to catch up with the modern demand for information. The main responsibility among stakeholders will be to reason up ways in which they can blend the traditional and the modern methods of engagements to take the reference service into the 21st century and catch up with post-covid19 demands. Also, recommendations were made to infuse library services with technology advancement.

Introduction

Reference services have taken a central place in library and information services. They are also regarded as personalized services since in most cases a personal discussion takes place between a user and a reference librarian. Based on this, the librarian points to the sources that are considered to be most appropriate to meet the specific information need(s) of the user. Since the web and digital libraries are meant for providing direct access to information sources and services without the intervention of human intermediaries, the pertinent question that appears is whether we need reference services in digital libraries, and, if so, how best to offer such services. Current digital libraries focus more on access to and retrieval of digital information and hardly lay emphasis on the service aspects. This may have been caused by

the narrower definitions of digital libraries formulated by digital library researchers.

Reference service is the benchmark to the image of the library; it has taken a central place in library and information science. Reference services and the library of the future cannot be explained without first understanding the fundamental function and role of reference service really in a library. Reference service is defined as personal assistance provided to library users seeking information (Palmer, 1999). They can be referred to as the "mediators between the user and information and navigators of the information superhighway". Reference services traditionally have been offered in person at a designated desk within the library building or through social platforms by an individual.

Reference service is playing an essential role in library today and it will keep been one of the core services been rendered in a library and



will determine and play a concrete role in the future evolution of library services and management. Libraries are expected to be defined by openness, participation and user driven services through constant and purposeful change to both improve services to current users and reach potential users (Nguyen, 2012). Reference services are no longer tied to the desk but can operate anywhere anytime. It is not the desk that matters anymore but the ethos of services, collaboration and partnership helping users to solve information need.

Library services is gradually advancing through digital means and moving fast away from the conventional paper to make it easier for users to access information anywhere in the world. Despite the possibility of being able to access information from anywhere you are around the globe, most people still find it difficult to get the actual information they need. This is where a reference service is essential and needed. The future libraries report identified four possible features of libraries experience in 2025. The features are the participatory knowledge preservation, enabling collaboration and decision making, hubs for community wellbeing, seamless learning experience, (Arup, 2015), hence, (Dickerson, 2016) suggests that the library of the future is a place where knowledge is created and not just accessed and preserved where the circulation or information desk can become a hub for the library rather than just a desk with a computer.

The future of reference services and the direction it should be going must be supported with adequate human resource. The human resource is referring to the library staff's skills and knowledge development. It is not one-day task to complete it, but it is continuous until it is able to achieve certain benchmark and level. Recently, the waves of information searching are changing the pattern. The changes obviously through the concept of doing everything by yourself searching. Most of the consultations are sent through email, telephone and forms on the websites and they can answer it within 48 hours. Compared to conventional way, most of the process time will take longer than we expected. The process will involve the librarian commitment, resources and information exchange through collaboration partners.

The virtual reference services become relevant in order to be part of the reference services itself

and library services on the right internet platform. The implementation of virtual reference services can be as an interactive remote reference service. The commercial reference services like "AskJeeves" have emerged in website and growing fast before 2020. This concept has highlighted question and answer session effectively. So, this concept can be implemented in reference service which allows the users ask questions and received the answers immediately and it is free from public information on the website. This kind of service can be one of the elements in reference desk and will guide the users who do not have time to come to library. However, this application is not for internal use only, but it can apply to big community, for example it serves as a medium of communication among collaboration partners and industry.

In conventional reference services, usually reference librarian is able to respond immediately by one-to-one session which means users come to reference desk and ask the basic question. The concept remains the same, but we add new value in service which is in virtual reference services. The users now have an option and alternative ways to choose whether to come to the library or have online session with expert librarian. The web is a platform for users and library to communicate. Also, to in information literacy and research skill. Learning can take place at the reference desk, and such can be transformed to online environment by allowing users to get the information. For example, library instruction, announcement, and reference services from hostel, residences, laboratories, or elsewhere. Library can earn benefit from technologies and this service model, which is developed for the commercial industry at first, but now it is applicable for reference services.

The evolution of e-commerce boosted by the development of system which provides live interactive customer service through web-based has shown that the interactive technologies will be useful for online live interaction reference. These commercial reference services have several options for libraries launching virtual reference services. This service can reach a wide audience and users on an extensive range of topics, problems and inquiries because of the internet which have expanded globally. So, libraries should set a clear idea about virtual reference services whether to serve among their own users or a broader community. The system



is offering whether the libraries can fully control the system or can be supported by technical team and vendor. It is important to have their own virtual reference service and at the same time to increase the usage of a library service, for those who do not physically drop by the library.

The capabilities of virtual reference services also allow the users, for example student, researcher, academics, to be able to do research and complete assignment from outside the library building. This opportunity will give universities and colleges the privilege to offer more courses and also to run distance and flexible learning programme. So, it will lead to a new position as distance librarian that will function as a library contents developer and more users will actively use library service outside the library. The idea of library as a convenient source is the key to library success. The word convenient is referring to the library which can reach out to the users in their office, hostel and café, and help them to find information, whenever they need it. It will be successful if the library itself is capable to provide the quality information and services for information seekers.

Role of Virtual Reference Librarian

The librarian, who is trained in a traditional way, will be equipped with the knowledge and skills of acquisition, organization, retrieval and dissemination of information. The traditional practice of librarianship should be retained while new skills in term of information technology skills should be encouraged. The librarians' role will remain especially the selection of resources, providing access, for example library instruction, consultation for researchers and assisting users to interpret the resources. The issues new librarians are facing nowadays is virtual library environment which is related to new technologies and blends the collection in digital forms. The new techniques are suitable to implement new forms of information resources and services. For supplying information for access, the virtual reference librarian must consider the environment and ambiance of any digital resources. The justification of hardware and software is considered in terms of availability and ability that can be used in effective way, the virtual library environment also needs to consider new technical set of competencies for librarians which were not previously required. Now the basic skills such as creating web pages, building

and maintaining computer networks, designing search interfaces are needed for today's library employment market. Along with the need for technical skills, the ability to plant a level of comfort with change is also required. One characteristic of the virtual library which librarians must fulfill is the rapidly transforming, changing and evolving librarianship nature of the environment. This environment is subject to immense change very quickly and a main role for the librarian in the future will be the ability to adapt and to work effectively in such an environment.

Statement of Problem

The efficiency of the reference service is needed to improve the standard of education of the users notwithstanding, it appears that lots of the patrons of the library cannot still differentiate some protocols been carried out by the reference section which are now making them to reverse to alternative means to source for the information they need, consequently most of the questions asked at the reference desk were not reference questions. The librarian did not set any criteria of user's question, but most frequently asked question can be solved within five minutes. It is more direct and general question and answers session. The questions usually asked are about technical parts, such as problem with photocopier machine, resetting the password and sometimes borrowing the stationary tools from reference desk. Also, users seemed confused about the role of librarians at the reference desk. The librarian has most of the times been mistaken as a support staff. The users assumed all library staff play the same role. Some of the users will ask the question in reference desk whereas the question should be asked in circulation department and the user hope that they will get the same answers as if they asked in circulation department.

In furtherance, the librarians who work at the reference service section were also having many other task jobs. They are also instructors in the Library Information Literacy Programme to the users. While conducting the information literacy programme to users, reference librarians also need to update their collection development activity. There are different studies on reference service, however, limited studies have been examined in area of reference service of the future in the post COVID-19 era. Hence, the attention is drawn to this part and may equally be



of help to their own faults after reading this work and correct them through findings proffered in this paper.

Research approach

This paper is approached as a literature review. Literature review summaries all past research efforts and is increasingly being used as a way of addressing new trends within a phenomenon such as reference service and its future in the post COVID-19 era. To ensure this rigor, past decades have seen a progressive evolution in literature review as research approach and is now being now considered as a means of research in their own right. Despite this development, the standard of many published reviews remains valid contribution to research. This paper summarizes the reference services and the library of the future, the literature review discusses some of the implications of the reference service and the library of the future.

Literature review

Reference and information services are constantly developing as the library itself. The earliest concept of modern reference work is usually traced to Samuel Swett Green's 1876 paper entitled "Personal relation between libraries and readers" in which he advocated the importance of personal service and guidance to the library patron (Green, 2000). Over the following hundreds of years, the concepts and practices of reference work have been expanded and have evolved significantly. Based on Green's ideas, (Bopp and Bunge, 2009) categorized the practices of reference services into three groups:

- i. Information services that take the forms of ready reference questions, bibliographic verification, interlibrary loan and document delivery, information and referral services, research questions and fee-based services and information brokering;
- ii. Guidance, including readers' advisory services, bibliography, term-paper counselling, selective dissemination of information (SDI)
- iii. current awareness service; and
- iv. One-to-one or group instruction.

Reference service/work can be defined as branch of the services of library which includes the assistance given to the users in their search for information on various subjects (Prytherch,

2000 cited in Adomi, 2007). Reference service deals with the provision of reference work by library staff. Reference services also mean all the functions performed by a trained librarian employed in the reference section of a library to meet the information needs of patrons; in person, by telephone or electronically (Bell, 2010). In line with this, Achebe (2012) was of the view that reference and information service is an aspect of library service in which contact between the reader and library materials is established through staff assistance, matching the user with the library materials which could be printed or electronic. She further said that, as a service legally provided by the reference librarian there is no gain, saying that reference and information service (RIS) is the life-wire and bridge of any library.

The absence of this service can make or mar the image of not only the library but also that of the profession. However, Reference and Information Service (RIS) is the most demanding of all the library services because it brings the content and activities of the library close to the user. Besides, it deals with human aspect of library service which is difficult to manage. Cardina (2004) stresses that, the library's collections and related services are meant to: support the teaching and learning process; support research; contribute to intellectual; professional and personal development; and assist in the conduct of institute's business. The goals of reference service are to meet the information research needs of the community and also to enable patrons to learn strategies for information research and the use of information retrieval tools available through the library Cardina (2004) also stated that, these goals are achieved by:

- i. Providing accurate, efficient and individual reference assistance to all clients in a courteous and encouraging manner.
- ii. Providing instruction and a positive learning experience for students to aid them in the development of information literacy skills. Reference staff take a proactive approach and do not wait to be asked for assistance;
- iii. Providing equitable reference assistance to all clients in a time frame appropriate to their needs, regardless of whether the client has come to the library,



telephoned, emailed, engaged in an online chat or text session or used other communication technologies. Service for clients at a distance is designed so that their information search and retrieval experience is comparable to that experienced by clients who choose to use the library in person; and

- iv. Providing an appropriate level of service to all clients. Every effort is made to ensure that each individual obtains the information required. The specific type of assistance depends on the level of library skills and on the needs of the client.

Today, with the amount and diversity of information available on the internet and in databases constantly increasing, the lack of organization on the web, the demands of users who want quick, clear answers in response to an information need and the lack of skills among users to find information they need, there is an even greater need for reference services today. Fortunately, Information and Communication Technology (ICT) and in particular the internet and online services provide opportunities for enhanced reference services. Many libraries are now offering or considering offering reference services via the internet to their users.

The field of reference service is vast and dynamic and many new developments have taken place in it during the last ten years or so. The rapid developments have occurred in computer technology, telecommunication (including satellite communication), printing, reprography, etcetera. These developments have important implications for the provision of information by libraries / information centres and documentation centres to their user (Kumar, 2008).

The digital environment has been defined by different authors as the environment in which computer and related digital devices are being used for social, economic and educational activities. But interesting definitions by Routledge (2000) states it as the development of a virtual environment in which individuals can take on virtual identities and transcend the limitations of the human environment. According to John and Paul (2000), the digital world permeates every part of our lives; our homes, our schools, our workplaces, our public spaces (transport, libraries, cafes and cities), and our government. It is in fact, very hard to get away from the digital

environment. "Even those who continue to resist computers, faxes, e-mail, personal digital assistants, let alone the internet and the world wide web can hardly avoid taking advantage of the embedded microchips and invisible processors that make phones easier to use, cars safer to drive, appliances more reliable, utilities more predictable, toys and games more enjoyable and the trains run on time.

Digital reference services provide many benefits for libraries. They can potentially operate 24 hours a day, 7 days a week when spread over a number of time zones; they provide services without regard to location or person. Digital reference services are available at the point of demand, that is the desktop. Digital reference also adds value to library service in that it supports social inclusion by extending reference services to physically challenged users who cannot come to the library for one reason or another. With digital reference services, these users can access information and receive real-time guidance from librarians (Berube, 2003). Digital reference services can take many forms, but they can be divided into two broad categories (Stephen, 2002 cited in Singh, 2004)

1. **Asynchronous transactions**, where there is a time delay between the question being posed and the answer being given. Asynchronous transactions generally take the form of:
 - a. **E-mail**, whereby a user sends a question or a request to the librarian or a specifically designated reference service section (e.g. libref@libraryname...) via regular e-mail. The user supplies whatever information he or she feels is necessary. The librarian may ask for clarification if necessary and sends the answer in a return e-mail or through telephone or fax. E-mail reference service is popular from the users' perspective because it is widely available, it does not require additional software, it is non-threatening and nonintrusive and the question can be stated in the user's own style of language. From the librarians' perspective, e-mail-based reference is easy to implement and no extra training is required.
 - b. **Web forms**, where users click on a button on the library's web site, which pops up a form where the question can



be typed in. Other specific information (e.g. name, email address) must also be filled in together with the question. The completed form is then sent to the library by clicking on a "send" (or "submit" or something similar) button. The library may replay by e-mail, telephone, fax or letter. Web forms provide a structured format and facilitate the framing of a question.

- c. **Ask a service**, which are usually corporate-sponsored web sites that allow users to ask questions and receive answers for free from public information located mainly on the world wide web or from proprietary databases and networks of field experts. A variety of Ask A services exist, Ask-An-Antarctic Expert to Ask-A-Reporter. A list of current Ask A services is available at <http://www.vrd.org/locator/subject.shtml>
2. **Synchronous transactions**, which take place in real-time with an almost immediate response to a query or a request. Synchronous transactions generally take the form of:
 - a. **Chat reference, using simple technologies**, where the reference librarian and the user can communicate with each other using short text messages in real time using normal chat software. The service may be using free instant messaging software (for example, ICQ or AOL Instant Messenger), web-based chat rooms (for instance Anexa.com), or chat software (such as Conference Room from Web Master). This form of reference is easy to use and allows basic communication. The user begins by typing in an opening query or question. The librarian may negotiate the query, if necessary, before leading the user to the information source.
 - b. **Chat reference, using web contact software**, where the software allows for instant messaging, and also allows collaborative browsing between the librarian and the user. The system usually consists of a split screen where in one screen the librarian and users can see each other's typed questions and responses, with the other screen showing

web pages, or other electronic information resources, or a library's catalog screen. The librarian can show the user particular pages or screens while carrying out a text-based conversation with him or her. This has the advantage that the user is actually able to see what the librarian was referring to instead of just a text-based description. Individual libraries usually offer this service at specific times of the day. In some systems, the text transactions can be recorded and e-mailed to the user as notes to refer, and for the librarian to keep for records. Some products are designed specifically for use in library settings, including virtual reference software from LSSI, and 24/7 reference from the Metropolitan Cooperative Library System, while some commercial products, such as Live Person, may be adapted for use in library settings (Kasowitz, 2001).

- c. **Video-conferencing or web-camera services**, where librarians and users are able to see each other in one window of the monitor through a camera. Web sites or other electronic resources can be displayed in another window on the monitor.
- d. **Digital reference robots**, use principles of artificial intelligence to respond to questions. A user types in a question and the system interprets it by asking the user to choose from a set of differently worded questions. Based on the choice, an answer is then provided. The best known of these systems is AskJeeves available on the internet.
3. **Collaborative digital reference services**, where two or more libraries team up to offer reference services using any of the above formats. The user would send a request to a member library, which would be forwarded to the member of library best able to answer the question. The library may receive the question because it has the domain strength or that it may be located in another time zone that was open when the user posed the question. Many libraries have recognized the benefits of providing collaborative digital reference



service. Existing library consortia are adding digital reference to current shared services and networks of libraries in different locations are getting together to share question loads and expertise. In 2002 the Library of Congress (LC) and Online Computer Library Centre (OCLC) began exploring ways to develop a Collaborative Digital Reference Service (CDRS). The notion behind CDRS was that creating online networks of libraries would combine the power of local collections and staff expertise with the diversity and availability of libraries and librarians throughout the world, 24 hours a day, 7 days a week. The CDRS pilot project eventually involved over 260 libraries of various types in the United States, Canada, the United Kingdom, Europe, and Asia. In June 2002, LC and OCLC introduced *QuestionPoint*, a cooperative digital reference service that evolved from CDRS and operates on a subscription basis (Penka, 2003).

Function of reference librarian and future Skills

Reference librarians are the heart and soul of libraries. It is their expertise and commitment that makes library's services so valued to its users (British Library, 2015). Reference librarians are valued by library visitors and seen as enablers, facilitators and short cuts to getting to the right contents in the most efficient way possible (Incling, 2016). In the context of emerging technologies that enable participation, librarians are no longer book keepers but rather information editors, organisers and advisors (Nguyen, 2012). Terrell (2015) argues the domain and workplace of the contemporary reference librarian is wherever the information is, for example, online. Technology has forced librarians to think about what their purpose is (Fister, 2016). The challenge is to continue to put users at the heart of everything we do as we also listen, innovate and adapt to a changing world (British Library, 2015). The focus on librarians having a much closer and more pro-active relationship with users has particular relevance. Staff must develop a good understanding of users' needs, as well as having excellent communication skills (Macaviciute, 2014). The function of reference librarians should

be about providing a product or service that helps users effectively, conveniently and affordably (Fister, 2016).

Reference services are no longer tied to a desk but can operate anywhere. It is not the desk (place) that matters but the ethos of service, collaboration and partnership; helping users to solve their information needs (Buss, 2016). This requires responsive, creative people who can think in innovative terms and collaborate (Steele, 2014). In academic libraries, future skills attentions for librarians are in developing more partnerships with teaching staff and taking an active role in synthesizing and promoting research data (Macaviciute, 2014). This emphasis on developing partnerships as relevant regardless of the library sector. Connaway (2013), suggests that librarians should embrace new and unconventional methods for delivering services and building relationships and possess a willingness and eagerness to try new technologies for services. Other relevant skills identified in the literature include community publishing, managing big and open data, people management, facilitation, technical awareness and coordination (O'Hehir and Reynolds, 2015).

Librarians may find their expertise used in a mentoring approach; working alongside users to support casual or formal lifelong learning, research and informed decision-making (Arup, 2015). Librarians can also have a role in encouraging self-reflective behaviours focused on curiosity (Deitering and Gascho Rempel, 2017) and have a role as champions of creativity (Bell, 2016). To do all these, librarians will need to gain the skills that enable them to help people engage meaningfully in society through digital fluency and citizenship (Hopkins, 2015).

Summary of the review

The evolution of reference services cannot compete and compare with the traditional and modern facilities which are dealing with technology. Reference service remain the existing task and responsibility but should think how to blend it with technology. Today, reference librarians usually improve the way to do things and we offer services to others, for example, libraries provide staff to explain or to guide the users about library layout, but now, libraries can provide the same services with 14-inch touch screen TV with directory applications. Reference desk also need to be ready to change to become



current and relevant reference desk librarian. To change something new, sometimes it will lead to unexpected result. It is important that reference librarians work as a team to effect necessary change. The staff must constantly promote the idea that change is important and it is required in order to remain pertinent in terms of references services.

The staff should take note of the user feedback which is important. The changes will lead to positive vibe in the library and users will feel more comfortable. Reference desk librarian should have a mind-set of change in term of the involvement, leadership, digital transformation, information and technology literacy. The reason for these changes is not just to ensure that the staff are familiar with services but can fully be of benefit to them. In general, communication skills and activities deserve more attention for traditional academic library. These changes post and interesting questions come into their minds, is all about developing staff at academics' libraries. As rapid changes in both information and education surrounding it will give impact to staff roles. The reference desk librarian should be able to define and embrace new roles as at the same time to develop existing ones. The contribution of energy, idea, work load, sometimes is just behind the scene and it is unheard. So they need to voice out to university leadership and funding bodies to understand the core value and contribution of libraries.

While discussing the technical part of virtual reference services, one of the common software that has been introduced since 2000 is virtual reference toolkit software which is as a host to reference network. There is no complete set of software, to install and setup the whole process for virtual reference services. The single software will be installed and integrated with online network and can be used every time of the day a week. Library information systems such as the Library System and Service also known as LSS has lots of reference services features and will charge the system integration in the library. In order to connect with distance learner and remote user, the workspace for reference librarian needs to equip with suitable tools, for them to connect and conduct live online reference session.

Recommendations

The following recommendations are made:

1. Libraries should explore how reference services have shifted to virtual platforms post-COVID-19 while the effectiveness of virtual reference services and the tools/libraries that have successfully implemented them should be celebrated so that other libraries can also implement.
2. Examine the role of technology in shaping the future of libraries, including AI, chatbots, and other innovative tools for reference services while there should be a continuous discussion on how technology can enhance or change traditional reference services.
3. How libraries are adapting their collections to be more digital and accessible, especially in the context of post-COVID-19 should be evaluated to explore the role of open access initiatives and how they contribute to the evolving landscape of reference services.
4. Libraries should collaborate with educational institutions, and technology companies to enhance reference services. Explore successful partnerships that have emerged as a response to post-COVID-19 challenges.
5. Examine how librarians and library staff have adapted their skills to meet the demands of evolving reference services so as to ensure the adequacy of ongoing training and professional development in the post-COVID-19 era.

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