

# V-Reference: Innovation in Developing Services According To Changing Needs of Users at The Public Library of Medan City

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**Abstract:** This paper to investigate preliminary study of the development of online reference services (v-reference) to meet the information needs of the Public Library of Medan City through the study of the use of reference collections. To find out if the existing reference service has been able to meet the information needs of the user. The population in this study is potential users who come to use the reference collection at the Medan Public Library Office, consisting of students, students, employees / employees and the general public. Sample determination was done by purposive. Technique of collecting data through interview, observation with quasi participant and library study. The results showed that the reference service available at the Medan Public Library Office is still far from user expectations. There are 6 dominant factors that influence the need for the development of reference service that is information behavior of the user, the information needs of the user, the availability of reference information, the location of the library, the satisfaction of the user, and the human resources. Two of the library locations and the availability of information require immediate handling of services that are able to reach the layers of the general public and the availability of reference collections is Virtual Reference.

**Keywords:** *Virtual Reference, Developing Services, Public Library, Developing Service, Medan*

## I. INTRODUCTION

Expectations of information society on technology increased along with the development of science and information technology (ICT). This has an impact on the existence of the library as a provider of information. Library is required to continue to innovate expand the library services so that information can reach all of user. Today people want everything in a fast and precise way. New libraries can be said to succeed if the library can meet the needs user, has a library collection in accordance with the needs of users and have quality services and facilities and infrastructure that support.

Characteristics of the quality library services can be seen from the collection, facilities and human resources. A study needs to be done to find out whether or not the services provided. Services can be evaluated from different points of view, one of which is the effectiveness of the service. The effectiveness of library services can be measured by how an organization reaches its goal of the service system provided by the library and provides the information needed by the user to achieve the satisfaction of the user.

Reference service is one of the service activities contained in the library to help librarians in the library to find and track information quickly and accurately and help the user to make use of the available facilities more optimally. The types of reference collections are dictionaries, encyclopedias, directories, statistics, almanacs, handbooks, manuals,

biographical sources, abstracts, bibliographies, indices, yearbooks, sources of earth science and government publishing.

Advances in information technology promise easy in accessing data or information, especially for institutions in the field of information management electronically including reference services in the library. The next virtual reference service called v-reference, is one of the reference services that utilizes information technology in its service. V-reference becomes the trend that libraries start to use as a service that attracts users to keep using library services through web, email, phone, and instant messaging services.

Penetration of mobile technology is so widely reaching the community even to remote areas in various countries. ICT implementation makes it easy for everyone to get access quickly and cheaply. Access to information using mobile devices spawned the term "information at the fingertips". The implementation of IT in libraries can support library services in order to be effective and efficient. Therefore this mobile technology for the library needs to be a concern. The presence of mobile technology runs linearly with increasing user expectations of libraries that serve as information providers.

Mobile phones with various types and specifications are the media that are currently widely used people. Portoresearch.com has predicted that by 2016, mobile phone subscribers in the world reach 8.5 billion. How about Indonesia? Data on The Telecommunication Development Sector (ITU-D) shows that Indonesia is a country in Southeast Asia with the largest number of mobile phone subscribers of 282 million subscribers (Surachman, 2014). Moderate Users of gadgets or smartphones seen from the number of applications Facebook applications in 2014 amounted to 7200 million people, We chat users as much as 438 million people, and users of BBM applications as many as 25 million people (Kompas, by Deliusno, 2015). This shows the use of mobile devices are "very ordinary". Starting from a vegetable brothers' brother, a street sweeper's sister, even a beggar in a stop lamp also uses a mobile device, it can be said that the potential of mobile users in Indonesia is enormous, and this should be utilized by libraries to develop their services. An important initiative to reach users more easily with libraries should be to transform to mobile-based technologies primarily to reach users from the growing Net Generation.

Library as a source of information of course concerned with the presence of these mobile devices. Libraries are challenged to be able to provide information accessible to users via mobile phones because today smart-phones, mobile phones, and other mobile technologies are becoming commonplace and are first used by people when searching for

information. Mobile devices are used as a tool for alerting up-to-date information as well as for searching. Libraries need to anticipate such conditions, among others, by providing mobile web services so that users can access information via mobile phones. There is no reason for the library to ignore the presence of mobile phones if the librarian responds to the demands of the users. There will be no technology that is more relevant to libraries than those currently used by users.

The Public Library of Medan City is a library that collects materials of regional documentation, especially materials that are considered to be known to the public, in the form of written works such that can be utilized for the development of municipal areas in all fields, such as seminars, symposia, local government decisions or regulations, official ceremonies, and so on. According to the data obtained, librarians who served in the Library Circulation Services Department of Medan is 19 i.e. 1 person the head of the library, 5 administrative staff, 3 people section of service, 3 people section collection and 3 guys section coaching of 19 people is only 4 people background of library education as well as with 2,600 members in 2017 but who actively visit and borrow a collection of 450 people, the rest are passive members who are only registered to be members but never borrowed and never visited again. Based on survey results to the library area of 2,273 sq., the library collection is now 17,530 titles, 50,000 copies consisting of books Reference, Islam, fiction, history, economy, health, agriculture, education and others amounted to 26,313 meet the needs of library users.

All activities in the library have been automated by using the SIPUS application in the local network (Local Area Network / LAN). Librarians who numbered 19 people with a background of science education SIPUS library used include circulation, processing, procurement and supervision of the library. Medan Public Library has 16 computers, 2 for circulation, 2 for searching service (OPAC) and 12 computers for internet service.

The Public Library of Medan City provides services in the provision of educational materials and other materials so as to be useful for mental coaching spiritual and guidance of citizenship on the basic foundation of Pancasila state to the general public, society, students, students in meeting the need for scientific resources and to know the difficulty of learning resources in accordance with the curriculum of Elementary School to Higher Education, in order to improve the quality of education and teaching in the region Medan municipality. Provide a place where all walks of life can follow the development of the country and the world in all fields, from newspapers, magazines, brochures, and providing recreational readings of pedagogical value, thereby benefiting the development of the souls of children and future generations. To guide, supervise and coordinate public libraries held in various corners in the municipality of Medan. With so many people who visit the library of the General City of Medan that uses both the reference collection, scientific journals and general collection.

Based on some realities in the field need to be developed services through the application of ICT is o-based library system online with emphasis on availability of information and access to reference collections that meet the needs of the reader is v-reference. V-Reference promises ease and speed in terms of access to information and in terms of providing information more effectively and efficiently.

## II. LITERATURE REVIEW

The current development of technology and communications, mobile (mobile) is one of the most important communication media for society, based on data from Association of Indonesian Cellular Telecommunication (ATSI), the number of mobile phone users in Indonesia until June 2010 is estimated to reach 180 million subscribers, or 80% of the total population of Indonesia (Syaikh and Muhajan, 2010). According to Ryeson University conducted a survey of half of mobile device users. From their research results, there are 6 of 11 library services show more than 50% of respondents who say that they access the library service through their mobile phone. This phenomenon is a problem for libraries. Mobile technology has a part in the utilization can efficiency of work, one of them is Android. Android technology is a good way to implement book collection in a mobile base. Android is a platform or application that is free to develop. No licenses or royalty fees to be developed on the Android platform. Android is a new generation platform of mobile platform that delivers the development to perform as expected. The underlying Android operating system is licensed under GNU, General Public License Version 2 (GPLv2), often known as the term "copy left" license in which any third party repairs must continue to fall below the term. Android is also distributed under the Apache Software (ASL/Apache2) license, often known as the "copy left" license where any third party repairs must continue to fall below the terms and for the second distribution and so on.

The reference service is a service provided by the library to provide assistance and guidance to the user in finding the information it needs. In this service there is a transaction involving the Library with the Reference Service Officer (Reference Librarian) called the reference transaction. Reference transactions are information contacts that involve knowledge, use, recommendations, interpretations, or instructions in the use of one or more sources of information by the Referrals from the Reference Officer. Reference transactions are information consultations in which Reference Librarians recommend, interpret, evaluate, and / or use information resources to assist others to meet specific information needs. equipment or policy statements (RUSA, 2008; RUSA, 2010).

Reference services can be divided into 3 types based on the treatment: Information services are done by answering the questions of the users according to their information needs ranging from very simple information up to information that is very complex, serving the needs of user information by way of cooperation, cross service and others. The types of services provided include: Ready reference questions, Research questions, interlibrary loan (Interbank libraries). Instructional is to provide instruction and instruction to the user to find the locate information needed independently or to help the user to select and use existing reference tools such as using reference collection, using catalogs, using online database, internet, etc. Guidance, the guidance intended here does not vary much with instructional. These three types of Service are both aimed at assisting the librarian in finding information.

In his work the Reference Librarian functions: To instruct the librarian how to use the library; helps the user by formulating questions and providing answers; help the librarian in the selection of the right library materials; and promoting libraries to communities (Duncan, 2011).

The penetration of information and communication technologies in reference services can be seen in the use of the Internet and software to assist long distance reference transactions between Reference Librarians and Readers. This is termed with digital references, virtual references, real-time references, reference chats, real-time chat references, Ask A Librarian, Ask Us, Ask Ask, Ask Away are used interchangeably as a term with the same meaning (Su, 2002).

V-Reference In this research ICT is used to expand the reach of library services by developing online transaction services. Services that use computers and communications technology to provide reference services to users anytime and anywhere referred to as Virtual Reference (OCLC, 2007). Reference services are started electronically, often in real-time, where customers use computers or other internet technologies to communicate with reference staff, without physically presenting. Commonly used communication channels in virtual reference include chat, video conferencing, voice over IP, co-browsing, e-mail, and instant messaging (Deer, 2010; Qomariyah, 2015).

The main purpose of v-Reference is to improve users find the information needed over long distances to improve library support for research and education by helping the collection of virtual resources references, shaped digitally (Arya, 2012; Smith, 2003).

Three broad categories of online transactions that can be applied in v-reference are:

1. Asynchronous Transactions, where there is a delay between the questions raised and the answers given. asynchronous transactions are generally shaped:
  - a. E-mail, where the user sends inquiries or requests to the librarian or reference service of the designated special section via regular e-mail. Supplies any user information that he / she feels is necessary. Librarians may ask for clarification as required, and send answers in e-mails back, or by phone reference service E-mail. Popular from the user's perspective as it is widely available, does not require any additional software, it is non-threatening and nonintrusive, and questions can be expressed in the user's own language style. From a librarian's perspective, e-mail based references are easy to implement, and no extra training is required.
  - b. The web form, where the user clicks a button on the library's website, which appears the form where it can type a question. Other specific information (e.g.: Name, e-mail address) should also be filled in together with the question. The completed form is then sent to the library by clicking on the "submit" (or "submit" or similar) button. Libraries can play back via e-mail, phone, or mail. The web form provides a structured format, and facilitates framing of the questions'.
  - c. Ask a service, which is usually a sponsored corporate website that allows users to ask questions and receive answers for free from public information located primarily on the World Wide Web or from proprietary databases and expert networking fields.
2. Synchronous Transactions, which take place in real-time with almost immediate response to queries or queries. sync transactions generally bump.
  - a. Chat reference, using simple technology, where reference librarians and users can communicate with each other using short text messages in real-time using the usual chat software. This service uses free instant

messaging software, web-based chat rooms, or chat software. The reference form is easy to use and allows for initial communication. The user begins by typing an opening query or question. Librarians can negotiate queries if necessary, before leading users to information resources.

- b. Chat reference, using web contact software, where software allows for instant messaging, and also allows browsing between librarians and users. The system typically consists of a split screen where in one screen the librarian and the user can view each typed question and response, with another screen page showing the web, or other electronic information source, or library catalog screen. Librarians can show users of a particular page or screen, while engaging in a text-based conversation.
  - c. Video-conferencing or web-camera services, where librarians and users can see each other in a single monitor window through the camera. Websites or other electronic resources may be displayed in another window on monitor.
  - d. Digital reference robots, using artificial intelligence principles to respond to questions. A type of user is in question, and the system interprets it by asking the user to choose from a different set of worded questions. By choice, the answer is then given.
3. Collaborative Virtual Reference Service, where two or more libraries work together to offer reference services using one of the above formats. The user will send a request to the member library, which will be forwarded to the member library best able to answer that question. The library may receive questions because it has domain power, or that it may be located in another time zone that opens when the user asks a question. Collaboration of digital reference meetings is a reference for collaborative activities between users and librarians who go reference interview. such tools include Web pages encouraging activities between users and librarians during Co-browsing's digital collaborative reference, guarding, and enabling users and librarians to jointly view resources such as OPAC, online databases and associated resources.
    - a. Co-browsing / escorting, is an application sharing feature in the web contact center. Co-browsing is sometimes referred to as collaborative browsing, follow-me, or escort, and usually involves web features. Everywhere librarians go users, allowing users to view librarians for desktop.
    - b. The web page pushing, as well as the co-browsing form, allows the librarian to send live web pages to the user's desktop (with active links) as opposed to screen shots (with dead links), which are copies of windows from the librarian desktop. The web page opens in the user's browser with a new page replacing the old one.

The concept of V-Reference can be applied as follows: Staffing, Transcript and statistics, Services hours, Promoting.(Ronan, 2003; Riggs, 2003).

### III. RESEARCH METHODS

The research was conducted during June until August 2017 at the Public Library of Medan City. The Public Library Office, consisting of students, students, employees / employees and the general public. Sample determination was done by purposive. Data collection techniques through questionnaires, participant quasi observation and literature study in the areas.

#### IV. RESULT AND DISCUSSION

The informant netted from the group consists of 28 people being librarian from the librarian group 2 people. Interviews are conducted online with a natural atmosphere, as is, and are not set in such a way for a particular purpose, and the language used is informal language. The content of the interview evolves according to the answer given by the informant. Interviews conducted repeatedly if the previous interview researchers feel there is still need to be added or less clear. Results of data reduction obtained some 6 categories:

##### 1. Information Behavior

The library of Medan Public Library is very diverse, ranging from the general public, students, students and librarians themselves. So also with their information behavior. Their expectations for fast and precise services and users are also increasingly diverse. From the interviews obtained, the users of the reference services in the Medan Public Library comprise the general public, students and students. "In fact most of the students, need reference materials for their tasks." V-reference makes it easy for users to find the information they need. Use of v-reference on the internet Answering informants "searching on goggle often gets lost, and frustrates. Time is also taken into account for users in using the service, so speed and accuracy in answering questions is also important for users to be satisfied with the service. How long does it take for the staff to answer the questions the user needs, as seen from the description of the following informant answer: "Usually we refer to the difficulty level of the question, usually a question of complaint and a simple question can be directly resourced immediately." " / inquiry of the user, depending on the difficulty level of questions of use, for example questions of library opening hours and services, librarians directly respond to questions directly from the user. For journal requests, our e-book is usually bit takes about 30 minutes to answer questions from users, usually for e-journal requests, e-books and other electronic information resources, direct mailbox librarians, drop boxes. "The staff's time to answer questions from users usually depends on the level difficulty inquiries from users, staff also utilize library collections and also internet.

##### 2. Information Needs

For frequently asked questions can be seen from the description of the following informant answers: "usually ask for reference books, ask about the list of libraries or there is no book, may be borrowed or not. Most of them are like that. "Frequently Asked Questions Users Hours library openings, availability of collections, theses, journals, e-books, book lending extensions. "Complete answers from informants through Monthly data of library instant messaging monthly reports that user questions include, e-journals, e-books, book self, e-thesis, Magazine, Member registrars, form, complaint, and others related to information about the field, research and responses.

##### 3. Availability of Reference Information

For the availability of information in the Public Library Medan City, Reader states: "searched often does not exist, so we search it on the Internet. But on the Internet sometimes long, so ask for help Librarian"

##### 4. Library Location

"Lazy yes, away from home, easy going through the web only"

##### 5. Satisfaction

Reader One that makes us continue to use the Library, yes it ... can directly ask the Librarian through online. We can ask the librarian there is no collection, new dating to library.

##### 6. Human Resources

From the interview data, obtained the category of human resources librarians and librarians who literate information. The informational libraries should be adept at identifying and evaluating information Using instant messaging Use of instant messaging, as instant messaging services as well as the use of social media, such as BBM, LINE, WA, Facebook. "For the use of instant messaging Public Library of Medan City must modify the instant service messaging so that it can be used flexibly by the Library. Librarian's reference: "The reference officer responds to every request or query, every time a direct schedule is answered on the spot, if other staff holds the service then who is in charge of the staff, but if it cannot be handled and need help staff who, other than other staff will help". Job description, need to share and assign the special officer in charge of instant messaging service. Each computer in the Library reference service installed instant messaging service in automate tis. User on duty according to the scheduled working hours / shifts ".Each staff holding the reference service has the responsibility to answer questions from user. From researchers observation should utilize existing facilities on their website to introduce the existence of the instant messaging reference service can be used for users who cannot come directly to the library, with the jargon "Fast, Reliable, Professional Librarian" makes users more interested in using this service.

Recommendations for v-referrals Support features that can be used to serve a virtual reference service: a. Knowledge base: The first line of attack in providing remote reference help lies in having an information store that users can consult before going to a source that requires human intervention. Not every question that comes to the reference table is unique. The pattern may not be different in web. Online chat: chatting or instant messaging has become a very popular way to communicate on the web, especially with younger users. instant messaging involves real-time two-way conversation just like a phone call, except that the user is text, not video. chat sessions offer a sense of immediate and personal, the user feels like it really exists. In the context of libraries, instant messaging can be used to answer simple questions because it is not always for long and complicated answers. C. E-mail: even when questions start in a chat session, there will be many cases where involving complex answers that may not be. immediatelyavailable. Once the answer has been developed. It can be sent to the protector of email.e. Co-browsing: providing web help involves the ability to interact with and control the user's web browser. Especially in providing support for web-based databases, e-journals, and the like, it is helpful to have a certain level of control over the user's web browser. Pre Constructed-message: in the virtual reference environment operation, there is many parts of a typical exchange are often repeated. things like standard greetings to visitors as sessions begin. sign off messages, and basic instructions for the main library database are examples of possible auto-text .g. Logging and statistics reporting: it is important to have the ability to learn how the system is used, to see patterns of use, and to evaluate the effectiveness of the system as a whole.

## CONCLUSION AND SUGGESTIONS

The results indicate that the reference service is available at the Medan Public Library Office is still far from user expectations. There are several dominant factors that influence reference services, library locations, and total number of reference collections. The solution to this issue is the service that is able to reach the general public layer and the availability of a reference collection that is Virtual Reference. From the results of research v-reference can take the form of asynchronous, synchronous and Collaborative. Virtual Reference Service with e-mail features, chat reference-instant messaging, co-browsing, which continues to grow along with the development of technology.

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