

# Reference Services 2.0: A Proposal Model for Reference Services in Library 2.0

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## Abstract

*Information technologies have facilitated traditional reference process and made it more effective. Nowadays, most of library reference services are web-based. New version of the Web tilted Web 2.0. Some Web tools are blogs, wikis, RSS feeds, social networks, podcasting, tagging, mashups and Instant Massaging. These tools can be used in reference services in library 2.0. This article has proposed a model for reference services in 2.0 world called RS 2.0 model. This model includes direct and indirect reference services. Reference interview is done via Instant Massaging in RS 2.0. Four types of wikis used in RS 2.0. They are Ready Reference Wiki, Library Instruction Wiki, Reference Project Wiki and Collaborative Review Wiki. Refnews Blog, RefLibrarian Blog and RefLink Blog are some proposal blogs for RS 2.0. Social networks, podcasting, RSS and tagging are used in this model. In fact, RS 2.0 is a mashup.*

**Keywords:** Reference Services 2.0, Library 2.0, Web 2.0

## 1. Introduction

Reference services concept has become common among American librarians since 1876. Reference services theories appeared in 20<sup>th</sup> century. There are three types of Reference services theories presented by James Wyer In 1930. There were Conservative theory, liberal theory and moderate theory. Conservative theory persists on education and guidance instead of boundless help. This theory states that reference work is limited to use the ready reference sources to help the users. Liberal theory focuses on the maximum help. According to this theory reference librarians must apply any approaches to retrieve the information that users need. In fact reference librarians carry out the whole job and reference work takes a long time in many cases. The average of conservative theory and liberal theory is moderate theory which most of reference

librarians prefer. In fact this theory results in high costs but the reference librarians can serve more readers (Moradi, 1373). Besides Wyer, other librarianship scientists presented reference services theories. All of them tried to identify the reference services in libraries.

Two types of reference services distinguished in libraries are direct reference services and indirect reference services. Direct reference service is a face-to-face process in which reference librarian answers the user's question directly. These services consist of information services and library instruction. In such services librarian individually helps the users to retrieve the information. Instruction is an inseparable part of direct reference services. Reference departments can provide it both in academic classrooms and in the library. Indirect reference services include reference sources selection, provision and publishing the



bibliographies, union catalogs, guidelines, newsletters, and reference sources evaluation (Ebrami, 1378).

All concepts discussed above are the fundamental aspects of the traditional reference services. Based on these concepts, new reference service models have designed and developed for many years. For example: Roving reference, Reconfiguring Reference Desks, No reference Desk, Consolidating Service Points, Tiered Reference, Outreach Reference and virtual Reference.

Information technologies have facilitated traditional reference process and made it more effective. The number of information technologies increase rapidly. Librarians and Information specialists cannot ignore the vital role of modern information technologies in libraries. World Wide Web is the most affective technology in libraries. Information services have been seriously influenced by the World Wide Web since 1990. As Mayo (2002) states, reference desk statistics of academic libraries are dropping as a result of the remote accessibility of electronic sources. ARL libraries are reflecting an increase in the number of e-mail references and a decrease in the number of in-person reference visits (Helfer, 2001).

Nowadays, most of library reference services are web-based. Users can meet their information needs without time and place limitations. Also they can have scholarly communications with others via web-based technologies. Traditional reference services concepts would perfectly be improved in new technological age.

This article aims at describing new version of the Web tilted Web 2.0 and tries to propose a model

for reference services in libraries make use of this modern technology.

## **2. Web 2.0**

The term “Web 2.0” was officially coined in 2004 by Dale Dougherty and Tim O’Reilly in O’Reilly Media Inc. - the company famous for its technology-related conferences and high quality books (Anderson, 2007; Wikipedia, 2007)

There is no single definition of Web 2.0, although certain experts can describe its characteristics, Coyle (2007) stated in his article. Tim O’Reilly (2006) defines Web 2.0 as:

Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an “architecture of participation”, and going beyond the page metaphor of Web 1.0 to deliver rich user experiences.

Web 2.0 is an attempt to make the Web much more public (Nouruzi, 1387). Participation, trust, collaboration and experience are key principles of Web 2.0. It is user friendly and user-centered. All users will be publishers and creators of their own information and entertainment channels. They can provide content and add value. Web 2.0 is a social interaction system. In fact, Web 2.0 built on the collective intelligent (Stephens & Collins, 2007).

As Web 2.0 soft wares utilize lightweight programming models, they are so light and quick.

### 3. Web 2.0 Tools

Web 2.0 tools are digital tools. Although allow users to create, change and publish dynamic content of all kinds, Web 2.0 tools syndicate and aggregate this content.

Some Web tools are the following:

- ◆ **Blogs:** Weblogs or blogs are simply software tools allow the easy creation of a Web site. Blog software, such as WordPress or Movable Type, creates the various pages of the site, a searchable archive, and a chronology of entries automatically (Stephens & Collins, 2007).
- ◆ **Rich Site Summary (RSS):** RSS is defined as XML-based metadata content from a blog or other source. Web content is created or published in one place to be displayed in other places, such as in RSS aggregators (also called “readers”). Some popular aggregators include Bloglines, NetVibes, and google reader. Whenever the source gets updated, the RSS feed gets updated and any aggregators that are subscribed to that feed are notified that there is new content available (Stephens & Collins, 2007).
- ◆ **Podcasting:** According to Stephens & Collins (2007), podcasting is a form of audio blogging. An audio file, such as interview, short presentation, or speech is attached as an MP3 audio file to a blog post and syndicated out via RSS. Aggregators such as Bloglines or the iTunes Music Store from Apple can subscribe to podcasts and automatically pull in new posts when they become available (Stephens & Collins, 2007).
- ◆ **Wikis:** Wikis are collaborative software applications that build Web sites. Ward Cunningham created the first wiki in 1995 when

he wanted a quick way to publish information collaborately on the Web. Cunningham called the wiki “the simplest online database that could possibly work”. Wikis can be freely written or edited by users so Web pages are authored collectively. The wiki software that runs a wiki is frequently called a wiki engine (Clyde, 2005). Some popular wiki engines include MediaWiki, PmWiki, MoinMoinWiki, and TWiki (Kille, 2005). The most popular wiki is Wikipedia, a collaborative, group edited encyclopedia.

- ◆ **Instant Messaging (IM):** IM or synchronous messaging allows real time conversation between individuals via Internet. In addition, IM includes file transfer and the capability for video chat or voice chat.
- ◆ **Tagging:** According to Maness (2006), tagging is essentially Web 2.0 because it allows users to add and change not only content (data), but content describing content (metadata). In Flickr, users tag pictures.
- ◆ **Social Networking Sites (SNS):** Social networking technologies afford users the chance to interact, share themselves, and create content. They enabled messaging, blogging and tagging. MySpace, FaceBook, Del.icio.us, Frapper, and Flickr are networks that have enjoyed massive popularity in Web 2.0. MySpace and FaceBook enable users to share themselves with one another. Del.icio.us enables users to share Web resources and Flickr enables the sharing of pictures. Fraper is a bit of a blended network, using maps, chat rooms, and pictures to connect individuals.
- ◆ **Mashups:** a mashup is a Web application that combines data from more one source into a single integrated tool. An example is the use of cartographic data from Google Maps to add location information to real-estate data, thereby

creating a new and distinct web service that was not originally provided by either source. Content used in mashups is typically obtained from a third party source through a public interface or API (web services) (Wikipedia, 2008). Mashups perhaps the single conceptual underpinning to all the technologies discussed above. For example WikiBios is a site where users create online biographies of one another, essentially blending blogs with social networks. In some ways, many of the technologies discussed above are mashups in their very nature (Maness, 2006).

**4. Library 2.0**

The term Library 2.0 was made by Michael Casey on his Library Crunch Blog (Curran, Murray & Christian, 2005). According to Stephens & Collins (2007), Library 2.0 is not only an extension of the rebooting of the Web, it is an application of the philosophies surrounding what makes Web 2.0 work. Library 2.0 seeks to break down barriers: barriers librarians have placed on services, barriers of place and time, and barriers inherent in what we do. In this user-centered paradigm, libraries can get information, entertainment and knowledge into the hands of users wherever they are by whatever means works best. Although Library 2.0 utilizes Web 2.0 technologies, it is not about

replacing the traditional technology adapted by libraries already in use but rather about adding additional functionality. In fact, web 2.0 principles offer libraries many opportunities to better serve their existing audiences.

If libraries want to attract the users in 2.0 world, they need to be where the users are. Users now are interested

in Web 2.0. They read blogs and make comments on them. They have their own blogs too. They broadly use RSS and wikis. If libraries acts as an outdated organization, can never carry out their mission and gradually have no patrons. According to Ranganathan rules, library is a dynamic organism. This rule can be improved well via web 2.0 applications.

**5. Reference Services 2.0**

A reference services model based on Web 2.0 principles called Reference Services 2.0 or RS 2.0 in this article. RS 2.0 is a proposal model using Web 2.0 tools for an effective reference service in 2.0 libraries.

**6. RS 2.0 Model Description**

RS 2.0 model includes direct and indirect reference services (Figure 1).

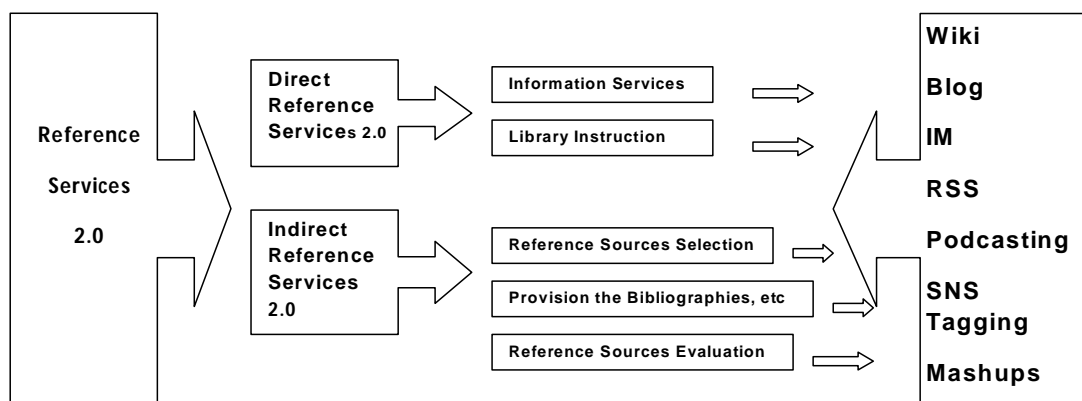


Figure1. RS 2.0 Model

**Web 2.0 tools used in this model are as follows:**

◆ **Instant Messaging (IM):** Reference interview is essential in the process of traditional reference services. RS 2.0 revives it via IM. According to Maness (2006), many might consider IM a Web 1.0 technology, as its inception predates the technology market crash and it often requires the downloading of software, whereas most 2.0 applications are wholly web-based. It is here considered 2.0 as it allows a user presence within the library web-presence. Already libraries are placing links to their chat reference services within resources themselves, such as at the article level in subscription databases. RS 2.0 offers immediate real - time assistance. Reference librarians can also send text, video and audio files such as library instruction files, ready references via IM.

◆ **Wikis:** four types of wikis used in RS 2.0 model (Figure 2). Ready reference wiki would be a perfect database for frequently asked questions. Users can add new content and also make revisions on it. A library instruction wiki created in RS 2.0 model. All librarians teach library instruction classes can contribute to it. This wiki includes handouts and tutorials used, teaching techniques and tips, class specific information, and anything else librarians might find useful. Collaborative Review Wiki also created in this model. Not only reference librarians, but also any users can review and evaluate the library reference resources via this wiki. Reference Project Wiki would be another type of wiki used in RS 2.0 model. This is a private wiki accessible only by a group of team members or it could be set up as publicly readable but editable only by members of the group (Kille, 2005). Reference librarians carry out reference projects such as selection and evaluation of reference resources, provision the bibliographies, union catalogs and guidelines via this type of wiki.

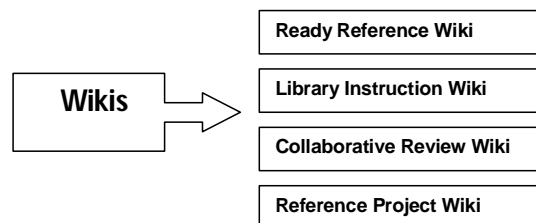


Figure 2. RS 2.0 wikis

◆ **Blogs:** RS 2.0 model includes several blogs too (Figure 3). For example a blog titled RefNews Blog in this model make the users be aware of the reference department's news. RefNews Blogs used in both direct and indirect reference services. For example by Refnews Blog, users informed about the date, time and the location of library instruction classes, the new reference services, the new reference sources provided for the library, and also the new ones published recently. Several reference sources introduced via Refnews blog. In fact it would be a reference department newsletter. Reference librarians also can share their points on the bogs. It helps them to make effective decisions and planning well for reference department services. This type of blogs named RefLibrarian Blog in this article. Another blog proposed in this model called RefLink Blog. This type of blog consists of useful links to Internet reference resources. Users participate to complete the blog content and keep it up to date by making comments.

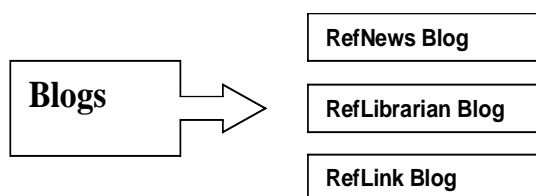


Figure 3. RS 2.0 blogs

◆ **RSS:** RS 2.0 model creates RSS feeds for users to subscribe to, including updates on new items in a reference collection and data bases. RSS feeds enable users to have a single, customized, personal library page (Maness, 2006).

◆ **Podcasting:** Library tutorials, interviews, reports, news etc might utilize podcasting.

◆ **Tagging:** Users can tag their favorite reference sources in RS 2.0. Tagging also enables user to identify reference resources tagged by others. Therefore, users recommend reference resources to one another. It's clear that reference librarians can better explore the users' information needs and favorites.

◆ **Social Networking Sites (SNS):** as libraries inherently are social organizations, SNS technology enables them to interact more with their users. For example LibraryThing is a social network enables users to catalog their books and view the books other users shared and cataloged. Social networks enable blogging and tagging, etc (Maness, 2006). Users can create accounts with the library reference network, recommend reference resources to one another, and the network recommend reference resources to users, based on similar profiles. In fact, RS 2.0 model would be a social network. RefThing can be used in RS 2.0 model as a social network.

◆ **Mashups:** The RS 2.0 model which makes use of wikis, blogs, IM, RSS, etc synchronously, would be a mashup. Mashup is a web application hybrid (Wikipedia, 2008).

## 7. Discussion

RS 2.0 revives traditional reference services in a modern environment. It is bilateral. Users can only

access the content via Web 1.0 based reference services while they can also create the content via Reference Services 2.0 (Figure 4). Therefore, it can be more dynamic and efficient.

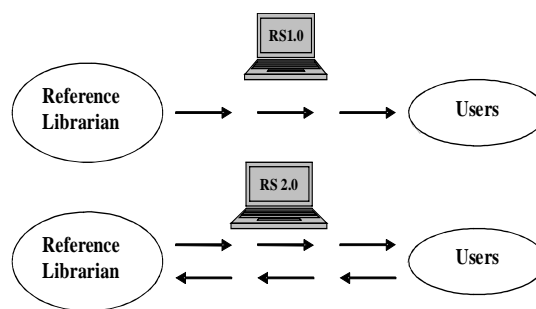


Figure 4. RS 1.0 versus RS 2.0

As wikis and blogs are more popular within users now, they greatly used in RS 2.0 model. Users especially whom with low level of information literacy know a little about all the web 2.0 tools, but they may search through wikipedia or do blogging.

This model can be used in all types of libraries. Users' culture affects RS 2.0 usage so it may vary from one library to another. As all users can collaborate and participate in RS 2.0, trust is an important concept cannot be ignored.

Editorship needs great considering in this model. Professional groups should be created to control the accuracy of the content.

## 8. Conclusion

RS 2.0 model is a proposal model can be used in 2.0 world. Library 2.0 can support RS 2.0 model well. Moving from RS 1 to RS 2.0 needs a delicate plan. Libraries cannot shift quickly to RS 2.0 unless reference librarians and users really become 2.0. Library and information sciences courses need updating to train reference librarian 2.0.

Librarians, who have worked in reference departments for many years, necessarily require retraining too.

There are other ways web 2.0 tools can be used in reference services. This article has proposed one. This model needs to be improved. It proposed to start web 2.0 – based reference services.

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