

13

Information Intermediation and Reference Services

Johanna Tunon

Editor's Introduction

Chapter 13: Information Intermediation and Reference Services examines the changing role of reference services as information users and intermediators engage with a plethora of information in both physical and virtual formats. Reference services lecturer and coeditor of two reference books, Johanna Tunon uses her expertise to summarize reference services, highlighting it as an essential component of information services. Tunon explores the impact of new technologies on reference services and the changing methods of information intermediation and instruction, as well as strategies for addressing the decentralized and distributed roles of today's reference librarians.

The chapter begins with a history of reference services before the internet, clarifies what is and what is not considered reference services, and examines the "new normal" as reference services and information intermediation now predominantly take place online. Information seekers today are using new technologies that change the way librarians approach reference services, and Tunon provides the reader with a toolbox for navigating this changing landscape and for effectively responding to today's often complex questions.

Reference services require the flexibility to deal with "rapid political, health, climate, and work-related changes," and information professionals will need to constantly improve their skill sets, reference platforms, and information-retrieval tools. Information professionals today need to prepare for changing user behaviors, help engage patrons with new information tools and resources, and partner with other organizations to maximize both programming and services. Tunon guides the reader through this essential role of information services and provides the resources they need to engage with diverse users and even more diverse information needs.

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The advent of the internet and Reference 2.0 services have changed the role of reference librarians in the last quarter century from passive purveyors of information to information intermediators and facilitators who help patrons access information in a myriad number of old and new ways. This chapter examines the changing roles of reference services and information intermediation in the twenty-first century. After completing this chapter, the reader should have an understanding of:

- the role of reference services before the internet;
- reference services in the twenty-first century;
- the impact of new technologies on reference services;

- the changing methods of information intermediation; and
- the strategies for addressing the decentralized and distributed roles of reference librarians and other information intermediators in today's "new normal" postpandemic world.

Reference Services Before the Internet

Up until about 150 years ago, information professionals primarily focused on the acquisition and organization of library holdings, and libraries were premised on providing a shared and enclosed location where books, journals, and other types of information could be accessed and used (see also Chapter 2: History of Libraries, Information, and Communities). In his 1876 paper "Personal Relations Between Libraries and Readers," Samuel Swett Green¹ introduced the concept of reference services as information intermediation through the process of helping users resolve a particular query, interest, task, or problem.

The pre-internet reference model provided librarian-centric reference services² at a reference desk staffed by professional librarians who conducted reference interviews to better understand the information needs of users. Reference questions ranged from ready reference questions about discrete facts, data, or information and verification of bibliographic information to directional, procedural, technical, subject, and specialized research questions. Reference librarians were typically supported by a physical reference collection of encyclopedias, dictionaries, atlases, thesauri, handbooks, directories, government documents, print indexes, and more that were housed nearby for ready access. Pre-internet roles ranged from answering various types of questions, providing library instruction on how to use library resources, and offering readers' advisory services. These roles remain essential for serving information users today and helping them meet their information needs.³ However, as reference services adapt to new trends in how information users seek information, so too must the competencies of reference services be defined, as is demonstrated in Textbox 13.1.

TEXTBOX 13.1

Key Competencies for Reference Services

The seven competencies identified by the Reference and User Services Association (RUSA):

- Access relevant and accurate information;
- Evaluate, collect, retrieve, and synthesize information;
- Consult, mediate, and guide the use of knowledge and information;
- Develop expertise in information literacy including textual, digital, visual, numerical, and spatial literacies;
- Promote and demonstrate the value of library services;
- Assess and respond to diversity in user needs, user communities, and user preferences; and
- Investigate, analyze, and plan to develop future services.

Reference Services for the Twenty-First Century

Reference services in the twenty-first century continue to focus on "providing assistance by using expertise in response to an information need."⁴ This 2021 Reference User and Services Association (RUSA) definition puts the focus squarely on information providers who help users address information needs by helping them locate and access needed resources. Contact with an information intermediary or library staff person can entail everything from the knowledge and use of information sources to providing recommendations, interpretations, or instruction related to those information queries.

This is noteworthy because a reference transaction is defined as “knowledge, use, commendation, interpretation, or instruction in the use of one or more information sources”⁵ rather than in terms of the amount of time or the duration of a reference transaction.

Reference work has traditionally been conducted at a reference desk, but big reference desks have fallen out of favor in recent years.⁶ One alternative has been the use of a single integrated service point for circulation, technology, and reference services staffed primarily by well-trained paraprofessionals. Another popular approach uses tiered reference services, with paraprofessionals and student workers⁷ who answer routine questions (e.g., about holdings, policies, printing issues, directions to the bathroom, and more) and professional librarians who are contacted for more difficult questions.

Reference help is provided to a diverse range of users, from LGBTQ+ individuals and seniors with technology questions about their smart devices to members of various minority groups and individuals who are unsheltered. Less traditional methods of providing reference help are also exemplified by the Jails and Reentry Services (JARS)⁸ program offered by reference librarians at the San Francisco Public Library. These librarians (with the help of library students and interns) use the old-fashioned postal mail to serve individuals who are incarcerated.

Reference work does not include two areas of public service, however, as defined in RUSA's updated 2021 definition.⁹ The first area not considered reference work is the formal provision of programs and workshops because the information being provided to users is offered in anticipation of a possible information need rather than in response to user questions about specific information needed (see also Chapter 5: Information Needs). The second area of public service not included is formal library instruction (see also Chapter 18: Teaching Users: Information and Technology Literacy Instruction). Even though RUSA does clearly recognize library instruction as an important and integral part of the continuum of reference services offered to users, formal instruction is not considered a reference service per se because it is initiated in response to requests by instructors or teachers rather than in response to identified information needs of students. It should be noted, however, that RUSA does count asynchronous aids (such as LibGuides,¹⁰ subject guides, and FAQs) as providing types of reference work because these research aids respond to users' on-demand¹¹ requests for assistance.

Tools used for reference services have expanded and continue to evolve in a number of ways. First of all, as online databases, library catalogs, and websites evolved, the line between traditional reference tools (like bibliographies, encyclopedias, dictionaries, and atlases) on one hand and online sources on the other has become less distinguishable with the result that information sources are becoming less place bound.¹² Subscriptions to reference resources (e.g., JSTOR, NewsBank, and Web of Science) and free government databases (e.g., ERIC, PubMed, and EDGAR) have become commonplace, whereas print reference tools (such as *Reader's Guide to Periodical Literature* and *Books in Print*) have become increasingly obsolete (see also Chapter 3: The Transformative Information Landscape).

Other changes have been accelerating as well. For example, reference tools traditionally provided in print reference resources and housed in libraries are now readily available in bundled digital collections (like CREDO Reference, Gale eBooks, and Oxford Reference). The digitization of millions of print books in mass digital collections (such as Google Books, Internet Archive, and the HathiTrust Digital Library) provides 24/7 direct access to scholarly resources—saving mass amounts of shelving space. The creation of a staggering amount of new web and digitized content¹³ over the last two decades has resulted in the rise of massive online repositories, such as the Digital Public Library of America (DPLA).¹⁴ Additionally, library access to print reference resources came to a complete halt when most

Check This Out

RUSA's Guidelines for Implementing and Maintaining Virtual Reference Services. Visit: http://www.ala.org/rusa/sites/ala.org/rusa/files/content/resources/guidelines/GuidelinesVirtualReference_2017.pdf.

libraries physically closed during the COVID-19 pandemic.¹⁵ Although the line distinguishing reference tools from other types of online resources has become increasingly blurred, digital reference sources can still be defined as tools routinely used to locate discrete pieces of information that can usually be retrieved online.¹⁶

Recommending and interpreting print and online information sources continues to play a pivotal role in reference work in the twenty-first century, but intermediators of all types need to understand the information ecosystems with which they work so they are better able to help users locate needed information.¹⁷ Information professionals use this knowledge to develop and maintain subject guides, pathfinders, LibGuides, and more. These types of aids, for example, were instrumental in providing information on demand about COVID-19 when the pandemic first struck.¹⁸ Similarly, school librarians and media specialists developed Bitmoji virtual libraries as a fun and visual method of optimizing discovery tools to aid their students in locating needed information for class assignments when school libraries were closed.¹⁹

Virtual Reference Tools

The pace of technological change in the last quarter century has increasingly diversified and decentralized the ways that information services are offered; and this has only accelerated since the COVID-19 pandemic. Reference help that was first only provided in person and then by phone can now also be delivered via email, chat, text,²⁰ social media, and more. Additionally, access to information has become easier with the use of personal devices and software solutions such as smartphones and tablets, cloud computing, and app technologies. Users and information intermediators

can also access a variety of new reference tools, including algorithm-based search engines, database search features, and citation tools to help answer questions (see also Chapter 17: Accessing Information Anywhere and Anytime: Access Services).

Because information is more accessible to the public, digital reference sources no longer necessarily require information intermediation.²¹ Powerful online tools like search engines (e.g., Google, Bing, Yahoo!, Swisscows, DuckDuckGo, and WolframAlpha) provide easy access to everything from web-based images and books to maps, videos, patents, and even computational knowledge. As a result, ready reference questions, such as the resale value of a full-size 2015 Ford F-150 pickup truck in the *Kelley Blue Book*²² or content for a fifth-grader's class project on California missions, can now be easily obtained 24/7 online. These new tools assist patrons and information professionals alike by also providing value by finding answers to more complex questions.²³ However, this has also resulted in a self-service society where people with internet access routinely conduct their own unmediated online searches.²⁴

Expanded access to online information has had two unintended consequences. First, easy access to online tools has resulted in the decline of reference

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To learn more about how libraries adapted their reference services in response to the pandemic, check out Appendix 13.1 COVID-19 Impact on Reference Services in Part IV: Chapter 13 of the Online Supplement.

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For a comprehensive list of examples of “do-it-yourself” reference tools, check out Appendix 13.2 Do-It-Yourself Reference Tools in Part IV: Chapter 13 of the Online Supplement.

questions in general and ready reference questions in particular.²⁵ Secondly, people on the other side of the digital divide have become increasingly informationally disadvantaged and disenfranchised, which became critically apparent when many people's access to the internet was restricted due to school and library closures in 2020 during the pandemic.²⁶ End users without access to the internet continue to face challenges to accessing reliable and appropriate information to meet their information needs.

On a different note, the advent of seamless and multimodal virtual reference tools has provided users with multichannel points of entry to hubs of information. Virtual reference services, sometimes

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called digital or mobile reference services, have extended the reach of traditional reference services by offering users synchronous and asynchronous computer-mediated reference services via email, chat/instant messaging (IM), texting/short message service (SMS), voice chat and cloud-based videoconferencing, and more. Web-based applications on smartphones and other mobile devices provide users with additional mobility, and the global reach and 24/7 anytime/anywhere point-of-need access of these tools mean that reference services are not place bound.²⁷ These tools proved invaluable to information

intermediators for providing reference services at a distance during the pandemic.

Despite the use of technology in online interactions, virtual reference interviews are not that different from face-to-face transactions because many of the same reference skills and techniques are used. Information professionals today have a variety of virtual reference tools (e.g., text messaging, synchronous reference options, etc.) to support their user needs but also encounter some challenges (e.g., real-time typed interactions can be cumbersome).

Because many information institutions do not have the staff to offer extended hours of reference services in person and online, online cooperative reference services that offer expanded or around-the-clock help have become another virtual reference option. For example, Springshare offers LibAnswers as a 24/7 reference cooperative that includes an international multichannel platform using a LibChat widget and the ability for libraries to answer questions via email, SMS, Facebook, and Twitter as well as providing access to

FAQ knowledge bases for academic and public libraries.²⁸ Other information institutions participate in consortial arrangements, such as Florida's statewide Ask-a-Librarian consortium of public and academic libraries. However, challenges can arise with consortial reference arrangements when the staffing of the virtual reference desk is shared among various participating libraries, and information professionals are asked to answer questions about library systems with which they have no personal knowledge or experience.

Technological advances have also impacted readers' advisory services that information professionals offer, particularly in school and public libraries (see also Chapter 8: Literacy and Media Centers: School Libraries and Chapter 10: Community Anchors for Lifelong Learning: Public Libraries). Information professionals use digital readers' advisory tools (such as NoveList, Goodreads, and even Pinterest) to provide book recommendations on topics ranging from Christian fiction and graphic novels to popular crafts and local history. Public libraries also quickly expanded their digital advisory services when in-person help and in-library browsing were not feasible during the COVID-19 pandemic.

Check This Out

For a list of virtual reference tools, check out Appendix 13.3 Virtual Reference Tools: Opportunities and Challenges in Part IV: Chapter 13 of the Online Supplement.

TEXTBOX 13.2

Discussion Question

What are the pros and cons of reference services delivered in person, by phone, and by various online virtual methods of communicating?

Web 2.0 social tools also encourage reference interactions through blogs, wikis, and group messaging. Social media tools (including TikTok, Instagram, Snapchat, Facebook, and Twitter) are frequently used to engage with personal learning networks, promote library resources and services, and even respond to information queries. The technological advancements in social tools have had a profound impact on library and information services, contributing to changes in the ways that reference services are delivered and to the development of a twenty-first-century service model called Reference 2.0.²⁹ Reference 2.0 is the term used to describe this new service model of collaborative social networking tools used in conjunction with information sources to provide digital reference services.

Reference 2.0 services have made it possible to move beyond the place-bound services offered at the reference desk to a two-way seamless interaction between information users and reference librarians that can be used to facilitate information intermediation services. For example, information professionals can:

- amplify their social networks by tweeting on Twitter when they may want expert help with specific questions,³⁰
- use social media to promote reference services and enhance information intermediation (see also Chapter 30: Communication, Marketing, and Outreach Strategies), and
- co-browse with a user through chat services (see also Chapter 12: Virtual Resources and Services).

Because users today have online access to decentralized, distributed, and often free sources for information intermediation services, reference services offered by libraries are competing with a variety of other information intermediation options in this age of Google. However, information professionals have unique expertise and skills that are otherwise not available to users via these other alternatives, and they are able to target their services to the needs of their local communities. Specifically, reference librarians provide value-added help to users with specialized research questions, are able to address patron-driven wants, and provide a “high-tech and high-touch” approach.³¹ This expertise positions them well to be knowledge professionals in the age of Google and adapt to the myriad circumstances and unforeseen challenges in delivering reference services.

“Reference librarians provide value-added help to users with specialized research questions, are able to address patron-driven wants, and provide a ‘high-tech and high-touch’ approach.”

TEXTBOX 13.3

Discussion Question

How do you envision the “new normal” reference services offered in your information organization in terms of service to diverse communities?

Roles for Information Intermediators

As information-seeking behaviors become increasingly user driven, virtual, and self-directed, reference librarians and other information intermediators continue handling traditional reference roles and taking on new methods for mediating between users. Management is one of those areas that plays an important role for providing reference work in all types of settings. For example, information sources need to be collected and managed, while service points used to deliver reference services need to be organized and assessed (see also Chapter 27: Managing Collections).³² This work can range from designing online and in-person services that meet the needs of the community being served to evaluating and improving how those services are delivered. Reference librarians also must ensure that reference staff are adequately trained and have ongoing professional development opportunities.

Outreach and marketing of services and resources that are offered by information organizations to the broader community of users are other important areas of responsibility handled by today's reference librarians.³³ Although librarians had been using social media for marketing and outreach in addition to more traditional tools for some time, the importance of promoting reference services virtually became much more apparent during the COVID-19 pandemic.

Embedded librarianship is one specialized method for offering outreach where librarians have an information intermediary role in a team or community.³⁴ For example, public librarians can be embedded personally or virtually in local government or community organizations and can serve as a great resource in times of crisis.³⁵ Academic outreach librarians, also called liaison librarians,³⁶ may have office hours or get embedded in online classes (see also Chapter 9: Learning and Research Institutions: Academic Libraries),³⁷ and they can serve as resources on curriculum planning committees at the departmental and university levels.³⁸ Embedded librarians have also developed a variety of collaborative relationships with patrons, city administrators, and even medical teams doing hospital rounds.³⁹ In fact, embedded librarians serve as information resources for everyone from local boards doing city planning to rapid response teams during medical emergencies.⁴⁰

A more traditional but still successful application of embedded librarianship is when information professionals collaborate in team-taught information literacy components of online courses and face-to-face classes.⁴¹ Providing just-in-time individual instruction and research assistance for students ensures that an information professional is available at the point of need in classes.⁴² Whatever their specific role is, embedded librarians are there to provide relevant information for students, teams, and the community whether it is in person or on demand asynchronously.

Supporting the educational mission of schools, community colleges, universities, and more is another important role of information intermediators. Reference librarians play an educational role in person and virtually by helping users learn how to locate, navigate, and evaluate information. For example, library staff support the information needs for the College Depot at the Phoenix Public Library⁴³ in addition to providing homework help and tutoring services for local school students and homeschoolers alike. During the COVID-19 pandemic when schools⁴⁴ and institutions of higher education had to pivot most or all their classes online, librarians were already positioned to use streaming media to deliver virtual reference transactions and library instruction at the point of need for students.

Information professionals are also stepping up and using their information skills to take a more active community service role. In his book *Palaces for the People*, Eric Klinenberg,⁴⁵ discusses how libraries can help address social inequality in civic life by helping with information needs in community hubs⁴⁶ during times of crisis. For example, librarians can help communities address everything from hurricanes and wildfires to food insecurity and a global pandemic⁴⁷ or by providing on-demand information via mental health kiosks (see Textbox 13.4).⁴⁸

Helping individuals use new technologies and develop new skills is another role for reference librarians. Brian Kenney⁴⁹ addresses this issue in his article, "Where Reference Fits in the Modern Library," when he argues that users are looking for ways to do everything from using 3D printers to doing genealogy research rather than simply locating information. Libraries offer technology help in

TEXTBOX 13.4

Case Study: Reference Services for People in Crisis

A woman who was pregnant, homeless, and quarantined in a hotel with COVID-19 had no food and no one to assist her obtain food. She contacted her local library looking for information on how she could obtain food assistance. The person at the reference desk contacted a local food bank, explained the situation, and was able to get back to the woman in crisis with contact information needed for immediate community assistance.

person and more recently virtually to help people use various technologies such as Kindles and iPads and answer questions about social media, e-books, audiobooks, and the web. Likewise, help with information on how to do things also takes place in makerspaces and beta spaces that foster innovation and experimentation.

A unique challenge for information professionals is that their roles have had to constantly change and adapt as today's modes of services also change and evolve. This means that twenty-first-century information professionals need the flexibility to deal with rapid political, health, climate, and work-related changes and to learn new processes and procedures in support of their service philosophy for the communities they serve.⁵⁰ For example, while information professionals were pivoting to provide services virtually during the COVID-19 pandemic, they were also simultaneously challenged to reimagine how their information services would be provided in the postpandemic new normal.⁵¹ This means that reference librarians and information intermediators of all kinds need to be creative, innovative, and technologically skilled, and information intermediators need new skill sets to offer the high-tech reference services their users want.

For example, school librarians were frequently the go-to people as technology integration leaders when schoolteachers and students had to switch to online instruction during the 2020–2021 academic year. In addition, school librarians assisted with everything from helping configure and distribute Chromebooks to students and helping teachers learn to use various learning management platforms such as Canvas on one hand to expanding online learning resources for online classes on the other.⁵²

Academic, public, and special librarians all faced similar challenges when figuring out how to safely offer reference services while working from home, using Zoom for instruction, meetings, and reference interviews, and developing online tutorials, Bitmoji virtual libraries,⁵³ and subject guides. However, no matter which delivery model is used or what type of information organization is involved, information professionals have demonstrated that they are prepared to integrate intermediation services and technology skills with other parts of their organizations to pivot and address the information needs of users in and outside of those organizations.⁵⁴

“ No matter which delivery model is used or what type of information organization is involved, information professionals have demonstrated that they are prepared to integrate intermediation services and technology skills with other parts of their organizations to pivot and address the information needs of users in and outside of those organizations. ”

The array of job titles other than the term “reference librarian” reflect the wide range of jobs that entail helping users find and access information that they need. For example, job titles can range from emerging technology librarian to community librarian

to student success librarian.⁵⁵ These emerging roles also can address interdepartmental responsibilities that range from managing learning resources centers in schools and institutions of higher educa-

tion to using learning management systems that provide access to digital resources and reference services.

It is important to understand that meeting specific users' information needs can and should proactively entail reaching out to users with services as varied as roving reference help and embedded librarianship on one hand to providing just-in-time technology help in person or online on the other. This also necessitates being able to develop tools to provide on-demand information via subject guides, pathfinders, LibGuides, and more. Behind the scenes, those same information

intermediaries continue to help with the development of discovery tools, outreach and marketing, the evaluation, acquisition, and assessment of information to satisfy information needs, and the management of service points.

Conclusion

In the twenty-first century, the definition of information intermediation focuses on helping users access and acquire the information they need. Reference librarians are key to achieving this goal and must be forward-thinking in serving the needs of their communities. This entails the efforts of information professionals who are open and adept at identifying what is changing and adapting accordingly. As information professionals, reference librarians understand that they can no longer wait passively for patrons to come to use the library's services in person or online. Instead, reference librarians are proactively and energetically promoting the library and the value and significance of the library's

services and resources to the communities served. This vision of reference services that is evolving in the twenty-first century focuses on new relationships with communities, but at the core, all types of information intermediators will continue to provide reference services that support their communities and satisfy their users' information needs through good customer service, creativity, innovation, and outreach that remains technologically relevant in the twenty-first century.

Check This Out

To access links to the online reference tools mentioned in this chapter, check out Appendix 13.5 Online Tools for Reference Services in Part IV: Chapter 13 of the Online Supplement.

Check This Out

For a list of job titles that highlight the various roles of reference professionals today, check out Appendix 13.4 New Job Titles that Include Reference and Information Intermediation Roles in Part VI: Chapter 13 of the Online Supplement.

Appendixes

Check out the following appendixes in Part IV: Chapter 13 of the Online Supplement.

- Appendix 13.1 COVID-19 Impact on Reference Services
- Appendix 13.2 Do-It-Yourself Reference Tools
- Appendix 13.3 Virtual Reference Tools: Opportunities and Challenges
- Appendix 13.4 New Job titles That Include Reference and Information Intermediation Roles
- Appendix 13.5 Online Tools for Reference Services

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