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Delivering Virtual Reference Services on the Web: An Investigation into the Current Practice by Academic Libraries

Sharon Q. Yang *, Heather A. Dalal

Rider University Libraries, 2083 Lawrenceville Road, Lawrenceville, NJ 08648, USA

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ABSTRACT

This article describes a study on web-based reference services in academic libraries. A random sample of 362 institutions was taken from Peterson's Four-Year Colleges 2013. The authors scanned each library's website for reference-related activities, specifically if the library 1) provides or advertises reference on the main page and terminology used to advertise the reference service; 2) provides chat and related information such as chat box location, provider (in-house vs. consortia), and the vendor or program used and 3) provides other forms of virtual reference through email, phone, text messaging, instant messenger, video chat, interactive knowledge base, and other technologies. The findings indicate that approximately 68% of the libraries in the sample stated reference services on the main webpage. About 74% of the libraries used at least one of the following technologies for virtual reference: email, phone, chat, IM, text, and video chat. Exactly 47.5% of the libraries provide chat. The institutions that offer more advanced degrees and have more students are more likely to offer chat than those who offer low-level degrees and fewer students. This is the only study on a large scale with details about virtual reference in academic libraries.

INTRODUCTION

Librarians have always been avid users of new technologies. Reference librarians have employed the most cutting edge technology, tools, and software products to find new ways to reach their distance users quickly and conveniently. Librarians quickly adapt to new technologies and software products as each becomes available, practical, and popular. In the 1970s and 1980s, academic libraries provided toll free phone numbers and fax lines for reference queries and during the 1990s email reference queries grew tremendously (Casey, 2004; Coffman & Arret, 2004). As far back as 1987, librarians provided digital reference on a system wide computing network (Copler, 1989). In the mid to late 1990s, synchronous video chat service was utilized by librarians (Casey, 2004; Matteson, Salamon, & Brewster, 2011) and in 1999, chat software programs such as Library Systems & Services (now Tutor.com), LivePerson, and QuestionPoint became pervasive, all of which had advanced features such as co-browsing and usage statistics (Casey, 2004; Coffman & Arret, 2004; Matteson et al., 2011). During this time chat reference expanded and library consortia worked together to provide virtual reference for extended hours. For example, Florida Distance Learning Reference and Referral Center began offering real time reference via chat in 1999 (Bishop & Torrence, 2007). In the late 1990s, librarians began to offer reference service via instant messaging tools, maintaining accounts on services such as AOL Instant Messenger (AIM) and Yahoo Messenger. Instant messenger did not include advanced features but was inexpensive, easy to use, and popular among college students. Instant messenger (IM) became cumbersome to manage as librarians attempted to use multiple account logins to reach patrons on whichever IM account they happened to use. This led to the use of aggregator services such as Meebo, Trillian, and Pidgin (Matteson et al., 2011). Meebo provided another desirable feature: a chat widget allowing users to chat without logging into or even obtaining accounts with specific instant messenger programs. Meebo became wildly popular among libraries offering chat services but in 2012, this service shut down and librarians were forced to review other options for a replacement (Breitbach, 2012).

In 2014, academic librarians are still proactively reaching users in a post-Meebo and rapidly growing technological age. As library users are growing more sophisticated, technologically equipped, and mobile, librarians are striving harder to be a part of the users' worlds by being available wherever they are. This study explores the current landscape of distance reference services and technologies offered by academic libraries on a large scale. It further examines the correlations of the aforementioned services and technologies to the characteristics of the libraries' parent institutions.

LITERATURE REVIEW

There are numerous research studies on virtual reference and granting full coverage to them is beyond the scope of this paper (see

* Corresponding author: Tel.: +1 6099033474 (cell), +1 6098955730 (office).
E-mail addresses: yangs@rider.edu, sharon2qq@gmail.com (S.Q. Yang).

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Matteson et al., 2011 for a recent synthesis of the literature related to live chat reference). Librarians are offering reference virtually anywhere. Reference services are provided via virtual worlds, such as Second Life (Godfrey, 2008), via web conferencing tools, such as Adobe Connect (Arvin & Kaiser, 2012), and via Web 2.0 websites, such as Twitter (Arya & Mishra, 2011). Librarians continue to pursue virtual reference technologies in order to meet users' needs.

HOW DO USERS DISCOVER VIRTUAL REFERENCE?

How users engage with virtual reference services determine many aspects of a typical library's use and promotion of them. Connoway and Radford's (2011) research on the interpersonal aspects of virtual reference reveals that users do not often discover virtual reference from the website, but instead from the staff's promotion of the services in settings such as the reference desk or research instruction sessions. Connoway and Radford (2011) still recommend that virtual reference be placed on the most frequently accessed pages of libraries' websites. For the purposes of the study reported in this article, it is only feasible to discover if virtual reference services are available on libraries' websites and whether the services are listed on either the library's main webpage or a subpage. The existence of virtual reference on a library's home page is an indicator that the service is active and most likely promoted to its users as well.

While researching this literature review, the authors encountered virtual reference surveys conducted in concurrence with usability studies. These studies ask how users discover reference services on libraries' websites with particular attention to the placement of the link to services on libraries' websites (Chow & Croxton, 2014; Dee & Allen, 2006; Mu, Dimitroff, Jordan, & Burclaff, 2011). Bao (2003) reports only 52% of the libraries in the sample presented web-based interactive reference services on their homepages. More recent surveys indicate that close to 80% of libraries place reference service information or links on their main webpages (Dee & Allen, 2006; Mu et al., 2011). In addition, the studies take note of the terminology used for reference. Dee and Allen's (2006) participants identify whether or not the term used for reference is clear, while others report what the most popular terminology includes: “Ask a librarian,” “Ask,” and “Help” (Bao, 2003; Dorris, Malloy, & Wallace, 2009; Mu et al., 2011). After identifying and discovering the reference links, users will encounter different technologies employed for reference services including email, phone, text and more.

TYPES OF VIRTUAL REFERENCE SERVICES

The literature contains studies focusing on one technology employed for distance reference service in libraries. Profit (2008)'s small scale survey is on text messaging reference in libraries and Francoeur (2001) reports on libraries' operational chat services including the tools and software products utilized to provide chat service. The literature also includes comparisons of multiple different technologies employed for distance reference services by libraries.

Surveys analyze usage of increasing numbers of technologies including email and chat (Dee & Allen, 2006); email, chat, and phone (Mon et al., 2008); email-only reference, synchronous reference, and no virtual reference (Mu et al., 2011); email, chat, and text (Dorris et al., 2009); email, reference forms, forums, video conferencing, and chat (Bao, 2003); and finally email, chat, text, and video conferencing (Chow & Croxton, 2014). Clearly virtual reference services are popular but none of the studies above are conducted on a large scale.

A very comprehensive, well-known, and large scale survey is conducted by the United States Department of Education's National Center for Education Statistics. This study, referred to as the American Libraries Survey (ALS) has been conducted since 1966 and on two year intervals since 1988. The ALS gathers data beyond virtual reference, also counting human resources (staffing, benefits), library expenditures, collections, gate count, library hours, services such as interlibrary loan, circulation, assistive technology for users with disabilities, and information literacy. In 2008, the ALS collected data on email or web-based reference (Phan, 2009). In 2010 and 2012, the survey expanded to include chat reference using commercial services, instant messaging applications, and short message services or text messaging (Phan, Hardesty, Hug, & Scheckells, 2012; Phan, Hardesty, & Hug, 2014). The findings indicate that 75% of the academic libraries supported virtual reference, 24% provide text message reference and 27%–59% provided chat. This large range for chat reference service is one dissimilarity between the ALS and the study reported in this article. This difference might be due to the questions used in the survey.

The ALS has some ambiguity in the questionnaire about commercial chat versus instant messenger chat. The instructions that accompanied the 2012 ALS questionnaire include examples of virtual reference services, dividing products into two categories: commercial chat service and instant messenger chat (Phan et al., 2014). This distinction might have been made for the advanced features available within the “commercial services”. For the purposes of the study reported here, all four of the examples (QuestionPoint, Tutor.com, LibraryH3lp, and Meebo) would be considered chat reference; instant messaging describes a scenario where the user cannot communicate with a librarian without first downloading and installing software, creating an account, and finally signing on to the IM system. The reference to Meebo (Phan et al., 2014), a now defunct technology, also makes the most recent 2012 data, appear older than it actually is.

In spite of some similarities in data collection between ALS and the study described in this article, key differences exist. Since remote reference is not the focus of the ALS, it does not provide as many details such as the vendors used for chat reference, or usage of newer technologies for reference including knowledge bases or video chat conferencing programs. Therefore, this article's study compliments the ALS by broadening its scope and depth in virtual reference.

SAMPLE SIZING AND RESEARCH METHODOLOGY

Another difference between the ALS and this study is the methodology. The ALS is a questionnaire sent to directors or deans of academic libraries and since it is conducted on a two year cycle, the results are published two years after the data collection. The ALS surveys are self-reporting, which is different from website examinations of actual utilization of remote reference technologies used. Both are prone to error, so the use of two different data collection and reporting strategies can verify and support each other. The strength of the ALS is its inclusion of a large number of libraries — exactly 3793 (85% of the population) in 2012, 3689 libraries in 2010, and 3827 in 2008 (Phan, 2009; Phan et al., 2012, 2014).

Other studies collected data about virtual reference with website examinations. However, they are on a much smaller scale or without the use of random sampling (Bao, 2003; Dee & Allen, 2006; Dorris et al., 2009; Francoeur, 2001; Mon et al., 2008). Bao (2003) reports a stratified sample of 143 libraries. Stratified samples can be just as efficient as random samples. Francoeur (2001) employed a very overachieving convenience sample (272 libraries) including surveys on library listservs, literature reviews and web searches. Some samples are limited to more sophisticated libraries as they are gathered from top lists, such as the top 100 public libraries (Mon et al., 2008) and top 100 universities (Mu et al., 2011). The sample studied by Dorris et al. (2009) and Dee and Allen (2006) are limited to health sciences libraries. Therefore their findings could only be applied to the participating libraries of those studies.

INSTITUTIONAL CHARACTERISTICS OF LIBRARIES USING VIRTUAL REFERENCE

While reporting on the use of virtual reference, only a few studies examine the type of libraries providing the service. To quickly get a