Archival Reference Knowledge

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ABSTRACT

Using Yakel and Torres's model of archival intelligence, this article raises questions about the knowledge needed to be a reference archivist. It draws on interviews with 28 users of academic archives (12 professors and 16 students) and 29 users of government archives (11 genealogists, 11 government employees, and 7 general researchers), which the authors conducted as part of the Archival Metrics Project, and an online survey of archivists conducted by the Society of American Archivists' Reference, Access and Outreach (RAO) Section. Based on the data from these studies, the authors developed the Archival Reference Knowledge (ARK) Model. The paper then compares and contrasts the model to five guidelines on archival education. It concludes by proposing ideas for future research.

KEY WORDS

User Studies, Archival Education, Reference

Villiam Donovan suggested that "the reference librarian is one of the few professionals who is being paid not only for doing, but also for knowing."[1] This statement brings to the fore the connection between reference work and expertise; we note, however that all experts have an extensive knowledge base (know that), as well as a deep understanding of how to approach problems (know how). A number of researchers have studied various aspects of library reference knowledge. For example, John Rodwell[2] and Kierstin Hill[3] discussed the link between a reference librarian's subject background and quality service, and Smith and Oliva examined the attitudes of academic librarians toward generalists and subject specialists;[4] others have discussed issues related to updating one's expertise.[5] The Reference and User Services Association (RUSA), a division of the American Library Association (ALA), has identified the essential knowledge for reference and user services librarians in its "Professional Competencies for Reference and User Services Librarians" document. Essential areas of knowledge identified by RUSA include

> (1) the structure of information resources in areas of knowledge central to primary users; (2) knowledge of basic information tools, including online catalogs, search systems, databases, Web sites, journals and monographs in both printed and electronic formats, videos, and sound recordings; (3) information seeking patterns and behaviors of primary users; (4) communication principles involving interaction with users both in person and through other channels; (5) the influence of technology on the structure of information; (6) copyright and intellectual property law; and (7) information competency standards.[6]

While research on library reference expertise is well established, research on the knowledge required to be a competent reference archivist is lacking. Archival associations in Great Britain, Canada, and the United States have indeed developed graduate education guidelines that delineate the content archival programs should provide, including reference and access courses, yet few studies from the field test these models. For example, the Society of American Archivists' (SAA) "Guidelines for Graduate Education" recommend that archival reference and access courses cover

> The policies and procedures designed to serve the information needs of various user groups, based on institutional mandates and constituencies, the nature of the materials, relevant laws and ethical considerations, and appropriate technologies. Instruction should also include the study of user behavior, user education, information retrieval techniques and technologies, user-based evaluation techniques, and the interaction between archivist and user in the reference process.[7]

One can surmise from this statement that archival reference staff need expertise in user behavior, assessment methodologies, information retrieval,

and relevant legalities, but articles in the archival literature rarely discuss archival reference knowledge, and no research has focused on identifying the knowledge needed to provide excellent archival reference.

In this article, we examine the knowledge needed to be a reference archivist. We draw on interviews with 28 users of academic archives (12 professors and 16 students) and 29 users of government archives (11 genealogists, 11 government employees, and 7 general researchers), which we conducted as part of the Archival Metrics Project.[8] We also draw on portions of a survey conducted by the Reference, Access, and Outreach (RAO) Section of SAA. We then use findings on what constitutes reference knowledge from the interviews and RAO survey. Based on the data from these studies, we develop the Archival Reference Knowledge (ARK) Model. We then compare and contrast the model to five guidelines on archival education. We conclude by proposing ideas for future research.

We hope the findings of this study will lead to research on, and discussion about, the expertise needed to provide quality archival reference service, as well as inform the development and revision of archival competency statements, professional archival education guidelines, and actual curricula. We conclude with some remarks about the implications of our findings on other archival processes and call for more research to investigate these issues.

Literature Review

While the library field has numerous monographs, journals, and dissertations that report research on library reference, research that discusses reference in an archival setting is lacking. In 2006, three research studies were published that investigated archival reference processes and identified skills and knowledge demonstrated by reference archivists. Denise Anthony studied the search behavior of novice and expert archivists and found that expert archivists drew on their knowledge and skills to locate materials effectively and efficiently. She concluded that knowledge of subject content of collections and knowledge of the records creators, including the functions of departments, the roles of individuals within an organization, the history of an organization, and the provenance and context of records, assist in the process of finding information.[9] Wendy Duff and Allison Fox interviewed archivists at two different archives and concluded that archivists need a strong grounding in history, as well as knowledge of records, record forms, and records creators, and an understanding of users' information needs.[10] They suggested that reference staff need to understand their archival access systems and be able to search for records using both the provenance and content-indexing methods as discussed by Richard Lytle.[11] Finally, Duff and Fox suggested reference archivists require excellent reference negotiation and communication skills. Ciaran Trace's ethnographic

study of two archivists found that reference archivists rely on their knowledge of collections garnered when arranging and describing materials to locate information.[12] Anthony also found that

> an experienced archivist was able to locate a specific document or record because they had processed the collection. The archivists had touched, sorted, arranged, labelled and shelved the materials . . . the archivist remembered because they understood and were able to ascribe meaning to the physical object.[13]

Anthony and Trace concluded that archivists often remember the content of materials that they have processed and draw on this knowledge when providing reference services. In 2012, Ciaran B. Trace and Carlos J. Ovalle examined syllabi from nine library and information studies programs with archival specialization in the United States.[14] They identified the readings related to reference used in introductory courses on archives and specialized archival reference courses and noted great variations in assigned readings with a few authors being represented across many courses. Others have also described the types of knowledge and skills reference archivists require. Richard J. Cox posited that reference archivists should understand users' needs,[15] and Frank Zabrosky suggested that reference archivists also require analytical skills and the ability to synthesize.[16] Undoubtedly, reference archivists need many different types of knowledge and various skills, but as LeRoy Barnett reminded us, good reference comes from both the heart as well as the head.[17] Finally, Mary Jo Pugh concluded that archivists provide six different types of information to users:

> Information about the repository
> Information about the holdings
> Information from the holdings
> Information about record creators
> Referrals to other repositories or resources
> Information about laws and ethics regarding the use of information[18]

Pugh, however, did not indicate how archivists should obtain this information. Presumably they use a combination of education, access tools, and personal knowledge to answer questions. While the literature contains some research focusing on reference archivists, no research has investigated users' views or opinions of the knowledge that reference archivists utilize when providing quality reference service.

Conceptual Framework

Elizabeth Yakel and Deborah Torres presented a model of the three types of knowledge users need to access and use archival materials: domain knowledge,

artifactual literacy, and archival intelligence.[19] Domain, or subject, knowledge is an understanding of the subject being researched; artifactual literacy is the "practice of criticism, analysis, and pedagogy that reads texts as if they were objects and objects as if they were texts."[20] Archival intelligence is a person's knowledge of archival principles, practices, and institutions, and an understanding of the relationship between primary sources and their surrogates. Archivists, along with users, need a good deal of subject knowledge and artifactual literacy to process collections, create value-added finding aids, and fulfill user needs. Archival intelligence is what archivists learn in their archival education programs, by reading and analyzing the archival literature, and through years of practice in repositories. But are these three types of knowledge the only ones needed to provide reference services at an optimal level? Are there other skills and types of knowledge that adept reference archivists must possess? What types of knowledge do users think reference archivists have or should have? Do researchers value reference archivists who demonstrate archival intelligence, or do researchers want reference staff with other types of knowledge?

Methodology

To answer these questions and develop a model of Archival Reference Knowledge, we conducted semistructured interviews with archival users and drew upon data from a Web-based survey of archivists conducted by the Society of American Archivists' Reference, Access, and Outreach Section. In addition, we analyzed a selection of archival education guidelines from around the English-speaking world.

Interviews

For the interviews, we recruited students and professors through flyers and personal email invitations, and we approached visitors to government archives and invited them to participate. In both cases, we used snowball sampling techniques to identify additional interviewees. In total, we conducted 47 interviews. We asked participants about their good and bad research experiences in archives and about reference and orientation sessions. We asked questions such as, "What qualities do you consider make for a good reference service?," and we asked them to list the three factors that influenced their archival experience most positively or negatively. We recorded and transcribed all interviews and removed any identifying information. We subsequently conducted content analysis upon the interview texts using Yakel and Torres's framework as a starting point for knowledge category development. In this paper, we identify the interviewees as student, professor, genealogist, government employee, or

general researcher, each with a sequential number; we use "he" or "she" interchangeably when referring to participants.

Online Questionnaire

The online questionnaire was designed and distributed by the Reference, Access, and Outreach Section of the Society of American Archivists from July 1 to October 31, 2010. The questionnaire included a number of open-ended questions, but for this paper, we used data from only two questions:[21]
1. What core skills are essential to be an effective reference archivist?
2. What additional skills are useful for reference work?

The format of the questionnaire encouraged respondents to identify a number of skills, and most respondents identified four to five essential skills or types of knowledge. RAO advertised the survey through newsletters, listservs, and meetings. In all, 45 individuals responded to the questionnaire.

Educational Guidelines and Competency Documents

We identified educational guidelines and competency documents through the websites of professional organizations, the literature, and personal contacts. For the purposes of this paper, we focused on five educational guidelines and competency documents from the English-speaking world. These were developed

Table 1: Educational Guidelines and Competency Documents

Title	Author	Date	Country
Statement of Knowledge for Recordkeeping Professionals	Australian Society of Archivists, RIM Professionals Australasia	2011	Australia
Guidelines for the Development of a Two-Year Curriculum for a Master of Archival Studies	Association of Canadian Archivists	1990	Canada
Accreditation of Post-Graduate Qualifications in Archives and Records Management	Archives and Records Association U.K. and Ireland	2010	United Kingdom and Ireland
Guidelines: Competencies for Special Collections Professionals	Rare Books and Manuscripts Section, Association of College and Research Libraries/American Library Association	2008	United States
Guidelines for a Graduate Program in Archival Studies	Society of American Archivists	2011	United States

between 1990 and 2011, although four of the five have been revised in the past five years. These documents are from five archives and records associations in four countries (United States, Canada, United Kingdom and Ireland, and Australia) and are outlined in Table 1. Each represents the latest statement on archival education by the national professional associations in these countries.

Data Analysis

INTERVIEWS

We reviewed and coded the transcripts from the Archival Metrics interviews using qualitative software, and we developed a coding dictionary for each set of interviews. In reviewing the codes, we discovered that many participants discussed the knowledge that reference archivists had used to answer their questions. We read and recoded the data several times and further subcategorized them to identify specific types of knowledge. In the first reading, we looked for the categories identified in Yakel and Torres's conceptual model, but we also noted passages in which users discussed other types of knowledge that archivists had, such as knowledge of records or collections highlighted by Pugh[22] and context of records identified by Anthony.[23] After coding, we reread each individual interview to understand better the context and tone in which the participants discussed the archivists' knowledge. We analyzed the interviews from professors and students before coding the interviews with the users of government archives.

RAO SURVEY

We also coded the responses to two relevant questions in the Society of American Archivists Reference, Access, and Outreach Section survey administered in 2010.

Most of the responses were short phrases identifying approximately four to five skills or types of knowledge. We coded the responses as a type of knowledge, a skill, a personal quality, or other. Finally, we counted the number of times the respondents noted a particular type of knowledge. We used the coding dictionary developed for the interviews to code the data.

EDUCATIONAL GUIDELINES AND COMPETENCY DOCUMENTS

We analyzed the entirety of each competency or guidelines document, not just the sections on reference, because we assumed that a specific competency is appropriate for a reference archivist when it is considered important for all

types of archivists. We coded as specifically as possible and did not double code. Therefore, if a competency document discussed question negotiation, we coded it as such and not also as general reference knowledge. For the Rare Books and Manuscripts Section (RBMS) document, we only analyzed competencies related to reference even though the document relies heavily on a more general set of competencies for librarians enumerated in the Association of Southeastern Research Libraries (ASERL) educational guidelines. The present RBMS statement focuses on elaborating on the ASERL competencies documents and applying them to special collections environments.

Limitations

Our study has two major limitations. First, the interviews reflect the views of professors, university students, and users of government archives and do not represent the opinions of all types of archives users. Furthermore, the participants had all interacted with physical archives; we did not specifically recruit researchers who primarily interacted remotely with archives and archivists. Finally, reusing data collected by others for other purposes is always problematic. The RAO survey had a very low response rate, and we could not control the sampling methodology. These data may be biased.

Findings

In recounting their previous positive and negative interactions with archivists, interviewees described the types of information archivists provided, as well as how archivists drew on their knowledge to identify sources relevant to a research request. The survey also identified the types of knowledge needed to provide reference services. These included domain knowledge, artifactual literacy, archival intelligence, knowledge related to information retrieval, knowledge related to collections, and contextual information about collections, users, and research methodologies.

The Users' Points of View

Domain knowledge

In the interviews, 16 participants (3 students, 1 professor, 6 genealogists, 2 general researchers, and 4 government employees) indicated that archivists sometimes use their knowledge of historical time periods to help locate and understand records.

For example, genealogist 3 explained, "Some things in genealogical research are inferential . . . and the social mores of today are not necessarily what they were 200 years ago so, it's just great to have someone who is actually a Rev[olutionary] War expert, so to speak as a resource." General researcher 1 also commented on the value of dealing with an archivist with domain knowledge. He stated, "They [the archivists] have a knowledge of history and that is a big area in this [his research]."

Artifactual literacy

Six interviewees provided insight into the importance of artifactual literacy. Student 7 described how she received help understanding a map. She "was confused on the orientation of the whole city because one map was different from the other. And so he [the archivist] sat there and went through it with me a little bit. But we came to the conclusion that one of them was definitely wrong." It appears the archivist helped student 7 to use artifactual literacy to understand and interpret a record. Two professors (2 and 3) commented on the type of artifactual literacy information that archivists should discuss with students, but they also identified the type of instruction archivists should not provide to students. Professor 2 suggested archivists should provide the following types of information about records:

> Professor 2: Biases no, how the documents are formed, yes, and authenticity, yes.
>
> Interviewer: And why the difference?
>
> Professor 2: Well because the bias, whether the source is biased or not is not a judgment of the form of the document but a judgment of the content of the document, and that's a historian's job and not an archivist's job. The archivist's job is to tell us what the document is, not what is in it.

According to these two professors, the archivist's role does not include the identification of bias, or the interpretation of documents, but does include understanding how the documents were formed and judging their authenticity—the components of artifactual literacy.

Three users of government archives remarked on the value of interacting with an archivist with artifactual literacy. Government employee 4 noted, "They knew of the map itself, they knew where to locate it, but they also knew the map so they were knowledgeable in that area so we were actually able to have a good discussion about the topic as well as the artifact itself." Two participants remarked on the archivists' knowledge of the nature of records and recordkeeping. Government employee 1 noted, "It's their job to explain the nature of

these different types of records and to assist people in understanding how the records work."

Archival intelligence

Many of the participants also suggested they valued knowledge related to archival intelligence. Yakel and Torres define archival intelligence as "a researcher's knowledge of archival principles, practices, and institutions, and an understanding of the relationship between primary sources and their surrogates."[24] We asked the students whether they had received an archival orientation session and, if so, the types of information provided in that session. Not surprisingly, a number suggested that their sessions included information about archival principles as well as guidance concerning practices and procedures, archival finding aids, and other access tools of the specific archival institution. Ten of the sixteen students discussed sessions in which archivists shared their knowledge about archival access systems. Often this information helped empower the students to search for themselves and work more independently. As student 10 explained,

> And it really helps to have the archivist there to lead you on a path. It's great to have ideas but knowing where to find everything, you kind of have an idea but sometimes they're really helpful in pushing you in the right direction. I think I just became a lot less intimidated of archives. They broke it down. It was very, like, you know, you can find everything here; you just have to be able to look for it.

Other students remarked on specific information about the holdings of the archives, finding aids, websites, and search strategies that they learned during orientation sessions. Almost all students suggested that information related to archival intelligence helped them locate materials and consequently saved them time searching. One student (9), however, explained he preferred to work independently and learn about the system on his own.

Archival intelligence also includes knowledge of the archives' practices and procedures. Seven students described getting this type of information from archivists during an orientation session. While some students indicated that the rules seemed restrictive, student 15 suggested that she needed information about the rules to ensure she did not make mistakes. On the whole, students wanted instruction on how to use the archival access system and information on archival rules and procedures. Still, more students seemed to appreciate information about the access systems than about the rules and procedures. These comments suggest that students understand the value of obtaining information from the reference archivists related to archival intelligence. However, the interviewees differentiated between information related to the archival

access systems and information related to other types of archival intelligence, such as rules that limit access to materials. For the most part, not surprisingly, the professors seemed to understand archival rules and procedures as well as archival principles, and none discussed getting this information from archivists. However, almost all the professors in this study wanted archivists to provide this type of information to students during orientation sessions.

While none of the users of government archives remarked on the value of knowledge about the archives rules and procedures, one noted the importance of having an archivist teach him how to use the finding aid.

Knowledge of collections

While a few participants commented favorably on the archivists' domain knowledge and information related to archival intelligence, more than half of the participants described interactions with archivists who had in-depth knowledge of archival collections. Professors, students, and users of government archives expressed this thought. Student 2 discussed dealing with "a lady [who] works there and knows that place like her own home." Professor 3 described the archives he used and noted, "The archivists there really know their vast collections and they're extremely helpful no matter what collections you're working on." Students often described, sometimes with amazement, getting assistance from an archivist with in-depth knowledge of archival collections. In one case, not only did the archivist know the general content of the materials, he also appeared to have detailed knowledge of each document. Student 10, an undergraduate, related his experience:

> At one point like at the end of the paper . . . I was very stupid about this and I didn't write down, like, where the boxes I'd been getting my information, what I'd been getting them from. And I had to do a bibliography obviously, so he went back based on the quotes that I used in my paper and found every single document that I used so I could put down the box number!

In this case, it appears the archivist knew the materials sufficiently well to identify the documents that contained specific quotes.

Interviewees also described getting help from archivists who suggested materials from memory, eliminating the need to consult the archival access systems. These archivists seem to perform the role of the "walking finding aid," a role much appreciated by many participants.

Student 14 also described her interactions with an archivist who was able to recommend materials that might be relevant, noting, "[name of archivist] several times was like, I think you might want to check this out, I think you might want to check that out."

Many of the professors described interacting with archivists who identified new research materials. For example, professor 1 recounted how an archivist had directed him to the fifty specific files in a large collection that related to her research.

The users of government archives also noted the value of speaking to a reference archivist with in-depth knowledge of the collections. Four general researchers, two government employees, and eight genealogists discussed interacting with these types of reference archivists. For example, government employee 4 believed that for archivists, "You gotta have a good grasp of your holdings." When asked, "What qualities do you consider make for a good reference service?," genealogist 3 replied, "Knowledge of the records. I mean there's just no other way to put it. And the staff has had some turnover the last year and a half and I've been really pleased with how quickly they have come to know the records and it's important to me." General researcher 6 stated, "[t]he second best thing would be knowledge of the collection . . . you know, the person has to know everything that's back there."

Some of the students and professors we interviewed recognized that an archivist's knowledge has limitations and that no archivist has knowledge of all documents in his or her archives.

> Having an archivist who knows the collections and can refer you to some just to begin with is helpful. Clearly no archivist knows every single collection, that's what finding aids and [the name of the online catalog] are for, but having some general direction, general idea about the topic or about what papers might be useful for it is important (student 8).

Anthony suggested archivists gain this knowledge when processing collections and handling materials, but a few participants spoke of the archivists' knowledge with wonder. For example, student 14 suggested that an archivist's ability to find materials is "mysterious." We do not know how archivists obtain this knowledge. Archivists may understand the functions and activities of a specific records creator, and, based on this knowledge, they are able to infer that the creator's records may contain information relevant to a research topic. On the other hand, archivists may connect a specific research need to information typically found in certain record forms; therefore, they direct users to those records. Some archivists, however, could have in-depth knowledge of some of the materials in their collections, such as the case of the archivist who identified records based on quotes as previously described.

Professor 3 suggested that archivists know the holdings because they work closely with the materials. Thus, they are able to "see outside the initial list." Interestingly, interviewees also noted that archivists often know what is *not* in a collection and could direct users away from materials that were *not* relevant.

Participants indicated that talking to archivists is very important when the finding aids and websites are not up to date; archivists can sometimes identify relevant materials that they had not yet cataloged (as noted above). Professor 2 stated, "And it's always easier to actually get the most update[d] information when you actually talk to someone there in person, because whatever the website says, that's what the website says."

Participants repeatedly suggested that archivists saved them time by steering them away from the wrong place or by directing them to relevant materials. Archivists with in-depth knowledge of the holdings can use their knowledge to guide students (professor 11), narrow down a question (professor 12), "shape questions" (professor 3), and help "reformulate" questions (professor 9). Still, student 13 suggested he did not want to be led too much, and professor 10 indicated that sometimes archivists direct a little too much and close off interesting lines of inquiry.

The interviewees suggested that not only did archivists point to collections in their own archives, sometimes they identified relevant materials held by other repositories. Students 2, 5, and 10 and professors 9 and 10 discussed interacting with archivists who had directed them to holdings outside of their institution.

> I think for grad students then it would be really helpful if an archivist said we don't have this but I know of a collection somewhere else. And that's happened for me in the archives sometimes where people have been able to direct me to other places (professor 10).

Contextual knowledge

Six participants (2 students, 1 professor, and 3 government archives users) also noted that the reference archivists had provided information about the creator of records. Student 5 suggested an archivist's knowledge of provenance and records creation helped her understand the records better. Student 2 described how he benefited from the archivist's contextual knowledge stating, "Because I knew nothing about that kind of stuff before. And so this guy, . . . the archivist knew about [name] but he also knew about people who he worked with and, you know, so he knew the bigger picture." Finally, professor 4 discussed the value of getting help from an archivist with knowledge of the provenance and history of records. She described her experience:

> Professor 4: But I remember going into the [archives] and [name] was working and he was responsible for this record group that I was interested in and we just sat down and talked for an hour and a half. Explanations about where material was gotten from . . . there's all sorts of intrigue and mystery with documents and archivists help you understand it.

Interviewer: And how does that impact on your research?

Professor 4: Well it helps you to problematize the sources, you know what you're using and what they represent and you can as a professional historian talk about inherent biases in the data.

Information about the provenance and the history of the records helped this participant interpret the records.

Understanding users

The findings suggest that the ability to help researchers make links between their information need and the archives' holdings depends upon the archivists' understanding of their users' needs. Not only did many participants explain the importance of talking to an archivist who showed interest in their topics, but some interviewees also suggested that, at times, they intentionally fostered good relationships with an archivist in the hope of gaining his or her support in identifying relevant materials.

> I think it's important then to have built a relationship with the archivist or archivists that you're working with, because then they're more willing to do extra searching and to go and really find and really think about how the documents you need might be filed (student 5).

A few professors also recounted how they informed their graduate students about the value of building a good relationship with archivists. Professor 11 stated, "At the grad level you just want to make sure that the students know that a good relationship with good archivists can make your project in ways that a bad relationship won't." This finding supports Catherine Johnson and Wendy Duff's suggestion that archivists can serve as the historian's social capital.[25]

Not everyone, however, wanted to build a close relationship with archivists. Professor 2 understood the value of having good associations with archivists in the Soviet archives he used, but he refused to do so. He described his feelings on this topic:

> What helps is if you have good relations with somebody that helps. But I really don't want to spend my time, like building particular, kind of a friendly style relationship with the particular person in order to get things done which have to be done anyway. I just feel it's not right.

Stronger relationships between archivists and users may help facilitate access to materials, but not everyone wants to foster these relationships. Furthermore, as noted by professor 2, in certain circumstances, purposely building good relationships with archivists may give the researcher an unfair advantage. Six participants (3 genealogists, 1 general researcher, and 2 government

researchers) also noted the importance of interacting with an archivist who knows his or her users and understands their needs. General researcher 3 noted, "It's important to have staff that can anticipate and understand what I'm asking even though I may not articulate it the same way. A person who's a good reader of people." When asked what makes for good service, genealogist 5 stated, ". . . in how you approach the patron and being able to feel out that patron and sense the attitude . . . and establishing a rapport with that patron." Government employee 11 replied, "You know, an ability to listen to the underlying question, trying to, you know, really to do a very good assessment of what the user is actually looking for rather than what the user says." It appears from these comments that knowledge of communication principles and reference interview techniques helps reference archivists provide quality service.

Research methodologies

Though neither the students nor the faculty members we interviewed suggested archivists need knowledge of research methodologies, genealogist 9 remarked,

> In the old days I knew those people had done a lot of research themselves and one of my problems today is that if you haven't done your own research in history and in local sources then you don't necessarily know how to help the public and that's one of my biggest questions, is how, what kind of training does the staff get?

In this case it appears that an archivist can draw on his or her knowledge and experience with historical research to help users.

THE ARCHIVISTS' POINTS OF VIEW

In the next section, we discuss our findings related to archivists' perspectives on the knowledge required by reference archivists based on the data from the RAO survey.

Domain knowledge

Twenty-four (53%) of the forty-five respondents to the RAO survey highlighted the importance of domain knowledge. They suggested reference archivists need "subject expertise," "background and context of history," "wide ranging historical knowledge," or "general historical knowledge of region/area covered by the institution's holdings."

Artifactual literacy

No respondents identified artifactual literacy as a valuable type of knowledge, though one noted that map literacy was an important additional skill. In-depth knowledge of the holdings and collections may include understanding the documentary forms of records and how these forms support business functions. Furthermore, knowledge of historical research methodology, a type of knowledge highlighted by many respondents to the survey, may include artifactual literacy.

Archival intelligence

Respondents to the survey noted the importance of a good grounding in archival intelligence for reference archivists, including "basic understanding of provenance and archival processing techniques," "understanding and ability to simply explain archival principles and practices," "know how to use the finding aids," and "general understanding of web-based and printed reference tools as guides." A few respondents also delineated types of knowledge related to archival intelligence in their response to the question on additional skills useful for reference: "knowledge of the card catalog," knowledge of the "OPAC," and "familiarity with catalog." One respondent also noted the importance of "understanding of issues of copyright, preservation, handling of materials, restrictions, etc.," and another suggested reference archivists need "legal/policy understanding."

Access systems

Respondents highlighted the importance of information retrieval knowledge, with 10 of the 45 (22%) mentioning the importance of knowing various databases, such as "Historical Abstracts, Worldcat [*sic*]," how to search for materials, and understanding basic skills of information retrieval and "search techniques." For example, one respondent suggested reference archivists need to understand "the search process and the ability to guide others through it," and another highlighted the importance of having "knowledge of a wide array of search tools both specific to archives and general information tools."

Knowledge of collections

The most frequently noted skill in the survey (26 of the 45 respondents, or 58%) was knowledge of collections. The respondents suggested that "intimate

understanding of the archives holdings," "basic knowledge of collections," and "general knowledge of holdings" are essential core skills of the reference archivist.

Only two of the survey respondents highlighted the importance of having knowledge of databases that provide access to materials in other repositories, with one mentioning the importance of knowledge of ArchiveGrid (a union list of archival descriptions from institutions around the world).

Contextual knowledge of collections

None of the respondents suggested that reference archivists need knowledge of records creators. However, "intimate understanding of the archives holdings" may include knowledge of records creators.

Knowledge of users

Respondents mentioned a variety of ways archivists should understand archives' users. Understanding information-seeking behavior and reference interview techniques can help. For example, one respondent noted that it is important to be "up-to-date on user habits," and one identified the need to have "knowledge of how information seeking behavior is manifested." Another pointed to the ability of "distilling the needs of the researcher." Furthermore, many respondents suggested archivists need good listening skills. For example, one respondent noted a core skill is the "ability to ask questions to better understand patrons and their needs." Numerous others noted that an archivist needs to be an "effective listener," to have "reference interview skills," and so on. We coded this type of answer, provided by 24 respondents, as being related to user knowledge.

Research methodologies

Ten respondents to the survey (22%) suggested that knowledge of research methodologies is essential for providing effective reference. One respondent noted that reference archivists need an "understanding of historical research methods"; another highlighted the importance of having a "background in historiography and research methods"; while another respondent highlighted the importance of "expertise in a variety of research methodologies." Still another respondent described the link between her research experiences and providing reference services, "Experience as a researcher oneself provides some of the best insight into being helpful with others."

Other knowledge

Other types of knowledge highlighted by respondents included knowledge of many languages, "computer literacy," and "pedagogical skills—knowing how to teach effectively."

These findings represent a diverse range of knowledge for reference archivists. In the next section, we take these findings and create a conceptual model that we refer to as Archival Reference Knowledge.

Archival Reference Knowledge

We organized the types of reference knowledge identified by archivists and users into three knowledge categories: research, collection, and interaction as presented in Table 2. The overall number of mentions and percentages demonstrate areas of agreement and disagreement among the archivists and the users. Both users and archivists valued knowledge of holdings and knowledge of archival institutions in equivalent percentages. Archivists valued domain knowledge, people skills, and the ability to work with systems more than did the users. On the other hand, users valued artifactural literacy and contextual knowledge about the collections more than did the archivists.

Table 2. Archival Reference Knowledge (ARK)

Types of Knowledge	RAO Survey (n = 45)	Archival Metrics Interviews (n = 57)
Research Knowledge		
Domain knowledge	24 (53%)	16 (28%)
Artifactual literacy	1 (2%)	6 (11%)
Research methodologies and historiography	2 (4%)	1 (2%)
Collection Knowledge		
Holdings knowledge	26 (58%)	32 (56%)
Contextual knowledge	0 (0%)	5 (9%)
Interaction Knowledge		
People	24 (53%)	12 (21%)
Institution	12 (27%)	16 (28%)
Access systems	10 (22%)	0 (0%)

FIGURE 1. Archival Reference Knowledge.

Based on our analysis of the data from the interviews and the survey, we propose a new model of Archival Reference Knowledge, which is presented in Figure 1.

ARK consists of three broad types of archival reference knowledge: research knowledge, interaction knowledge, and collection knowledge with each of these categories consisting of specific types of knowledge identified in our data analysis. Research knowledge includes two types of knowledge delineated in Yakel and Torres's model, artifactual literacy and domain knowledge. We added research methodologies to this based on our study. Artifactual literacy includes understanding how to read texts as objects, how to interpret various documentary forms, and how to make connections among various genres and genre systems extant in primary source collections. Domain knowledge pertains to the foci of collections as well as to the major themes that could be investigated through the use of the collections. Finally, research methodologies expertise enables reference archivists to assist users in identifying tactics for searching as well as decoding and making meaning from archival documents.

Providing reference services involves interaction knowledge. Reference archivists require interaction knowledge to gain an understanding of their users' needs and to identify relevant materials to meet those needs. There are three dimensions to this: knowledge of archival institutions and practices, knowledge of archival access systems, and knowledge of people. These categories in turn consist of more specific knowledge. Institution knowledge includes knowledge about archives rules and procedures that constrain access, as well as knowledge of reference service policies. In Yakel and Torres's model, this type of knowledge is considered archival intelligence.[26] Knowledge related to information retrieval includes knowledge of databases, searching techniques, structure of finding aids, and other archival representations that are part of access systems. This type of knowledge is also part of archival intelligence in Yakel and Torres's model. People knowledge relates to communication, including listening skills and techniques for building rapport, as well as understanding information-seeking behavior.

The final category of knowledge is collection knowledge, which includes knowledge of the holdings as well as contextual knowledge about those holdings. As previously noted, users and archivists both indicated that knowing about collections held in other repositories is also important. Collection knowledge is gained from working with the collection, reviewing finding aids, and accessing materials on the reference desk. Collection knowledge helps the reference archivist identify materials to answer reference questions or support research. Users also indicate that reference archivists should have contextual knowledge about the collection, such as knowledge about the provenance of the materials.

Implications for Reference Education

We examined five sets of educational guidelines promulgated by five archival associations representing four English-speaking countries (see Table 1). These documents delineate the knowledge required for reference work in sections devoted to it as well as in general sections. The overall values and emphases vary across competency documents; the U.S. (SAA and RBMS) guidelines focus on users, whereas the Australian competencies center on accountability.[27] In Table 3, we provide an overview of the results of our content analysis.

One of the greatest discrepancies between the educational guidelines and our findings emerged over the types of research knowledge. The guidelines place more emphasis on research methodology than we found in our study. In terms of research knowledge, the educational guidelines value domain knowledge much less than did the participants and respondents in our study. The Rare Books and Manuscripts Section has the only set of guidelines that specifically

alludes to external domain knowledge: "Develops and maintains knowledge of liberal arts, history, and culture."[28] Likewise, the SAA guidelines highlight the importance of critical thinking skills and ways of knowing, and ACA and SAA also note the importance of scholarly research as a means to "enhance students' ability to think critically"[29] or the writing of a thesis, which is a "critical analysis."[30]

Table 3. Comparison of ARK and Educational Competencies and Guidelines

Types of Knowledge	RAO Survey (*n* = 45)	Archival Metrics Interviews (*n* = 57)	Competencies/ Guidelines (*n* = 5)
Research Knowledge			
Domain knowledge	24 (53%)	16 (28%)	20% (1)
Artifactual literacy	1 (2%)	6 (11%)	100% (5)
Research methodologies and historiography	2 (4%)	1 (2%)	80% (4)
Collection Knowledge			
Holdings knowledge	26 (58%)	32 (56%)	80%
Contextual knowledge	0 (0%)	5 (9%)	0%
Interaction Knowledge			
People	24 (53%)	12 (21%)	40%
Institution	12 (27%)	16 (28%)	80%
Systems	10 (22%)	0 (0%)	60%

In reviewing information on collection knowledge, we found more synergy between the guidelines and our findings. All of the English-language guidelines except those from the United Kingdom and Ireland stress the importance of holdings knowledge, as did a majority of the users and the archivists. In addition to classroom work, students obtain knowledge of collections through internships, but do they also learn techniques to gain familiarity with a repository's holdings? As some participants suggested, archivists often gain this expertise by appraising, processing, describing, and providing access to this material. According to Eric Ketelaar, "Beroepsprofiel Archivaris (archiefbeherende instelling)" also highlights the importance of this knowledge.[31] "The archivist is able to familiarize himself adequately and quickly with content and character of the 'own' archives and collections."

Finally, the views on interaction knowledge were mixed. Documents from Australia, Canada, the United Kingdom and Ireland, and the United States all consider knowledge of recordkeeping systems and practices to be the core domain knowledge required by all archivists. We coded this under "institutional

knowledge of practices." Therefore the guidelines place more importance on this than did either users or other archivists.

We coded the creation of finding aids and other types of access tools as access systems knowledge. However, the guidelines were uniformly silent on the intellectual nature of developing finding aids. In terms of specific reference knowledge, three of the guidelines (Canada, U.K. and Ireland, and RBMS) provide very general guidance on what students should know about reference services; specific mention of the importance of assessing users' needs and communication patterns appears in only three documents (Australia, SAA, and RBMS). The guidelines do not seem to deem these skills as important as did the respondents in our study.

While we analyzed the English-language educational guidelines in depth, we do have some comparative evidence from other national archival traditions. In an email to us, Eric Ketelaar explained,

> "Beroepsprofiel Archivaris" lists 9 domains (*Taakdomein*) corresponding to archival functions. . . . The domain *Beschikbaar stellen* (Reference) is the most relevant for your ARK, but there are competencies in other domains which are relevant too. For example, in the last domain (*Taakoverstijgend*—overarching all tasks) 1.1 states "The archivist is able to familiarize himself adequately and quickly with content and character of the 'own' archives and collections." And in the domain *Onderzoek* (Research) the example is "Specialized in sources and their use, act as a partner in contacts with scholars."[32]

In a published article comparing national competency documents, Ketelaar also suggested,

> Reference service and mediation get less attention in the Australian, French and Italian profiles but . . . [they are] considered extremely important for Spanish archivists. Research in and about archives is important for the French and Dutch archivist, but less important in Spain, Flanders and Switzerland. In Italy and Austria there is much focus on history and palaeographic and language skills. [33]

Stephano Vitali also supported Ketelaar's analysis of the situation in Italy:

> As far as I know we don't have any university courses neither other professional education initiatives for training reference archivists. Moreover, I haven't seen in any Italian archival manual a chapter or even a few pages dedicated to reference archivists. . . . In a book by Roberto Cerri (*L'archivio storico dell'ente locale come servizio pubblico*, Archilab, 1999) there is a three page section whose title is "Il reference archivistico." So, as far as I know, we don't have in Italy specific competence models for reference archivists.[34]

In the literature, Terry Eastwood[35] and Janice Ruth[36] outlined elements needed in courses on public programming and reference. Eastwood suggested

that courses on reference services should include public programming as well as discussions on equal access to archival materials, ethical concerns, the users and uses of archives, and archival instruction. Ruth recommended archival reference courses provide content on the theoretical aspects of the reference process, communication theory, online searching, information on how the major user groups approach their research, and simulations of the reference interview.

We know from studies of archival education programs that knowledge in the ARK model is not taught universally. In an early study of archival education programs, Lytle found that some formal education programs provide archival students with information about archival principles, the format and organization of archival finding aids, information retrieval techniques including provenance, and subject methods of retrieval.[37] Later studies have found that many introductory archives courses cover archival reference (83.33% of 30 courses),[38] only 6 out of 62 schools offering archival education dedicate a course to reference work.[39] Overall, these articles demonstrate that little emphasis has been placed on reference knowledge in formal archival education.

Some types of knowledge valued by many of the participants in the study and identified by the majority of respondents to the survey are not easily acquired through formal education. However, educational programs can teach techniques for reading finding aids and understanding their links with collections (this ability to understand the connection between representations and the actual documents is referred to as intellective skills in Yakel and Torres's model), and how to think about collections, particularly ways to make connections among the documentary form of records, the functions and activities of records creators, and the content of records. It becomes clear that archival education must include both the archival domain-specific knowledge as represented in the documents of the SAA and the Archives and Records Association United Kingdom and Ireland—as well as the cognitive ability to think like an archivist. For example, students need to begin to develop the techniques for gaining knowledge about the repository, collections, and records creators and domain knowledge, which provides a context for archival materials.

Future Research

This study investigated the types of knowledge needed to provide reference services in an archival setting. However, it also raises a number of questions. The current study involved interviews with users who have visited physical archives, though many interviewees indicated that they also correspond with archivists by email and only use the archives remotely. Future research, however, should investigate what users who access archives solely online want reference archivists to know. In addition, as mediation diminishes and more and more archival

records and services are put on the Web, will the archivist's expertise be lost or become irrelevant, or will remote users simply not have access to it? Will archivists become more involved in research activities, thus highlighting the need for education concerning research methods? Will archivists need more data from user studies as opportunities to learn about their users through personal interactions disappear? We also need research to understand better the types of interaction skills archivists need using social media, blogs, wikis, Twitter, or chat reference. For example, do the skills required for face-to-face interactions apply in the virtual environment? Thus far, neither archivists nor the formal educational guidelines have articulated how online access might impact reference education.

This study also raises questions about whether users are better served by dedicated reference staff or by archivists who spend only part of their time at the reference desk and the remainder processing material. As Duff pointed out, "Dedicated reference staff often become very proficient in question negotiation and developing search strategies,"[40] but research studies conducted by Trace[41] and Anthony[42] found that expert archivists often employ knowledge gained when they arrange and describe collections. We need research to investigate how archivists can gain the required in-depth knowledge of their collections especially of in the age of "More Product, Less Process"[43] (MPLP).

In this study, we propose an Archival Reference Knowledge Model based on accounts by users of their experiences using archives and interacting with reference archivists, data from a survey of archivists, and a comparison of educational guidelines. Users provided insights into the knowledge they observed and valued. Previous studies based on observations and interviews with reference archivists and the survey reported in this paper also identified the knowledge of reference archivists, and their findings support the ARK model.[44] However, more studies on reference that utilize different research methods and study the opinions of different types of archival users are needed to test the ARK model. Also, we need a better understanding of how the reference archivist impacts the researcher's experience. Some participants suggested the reference archivist was able to save them time, refine their questions, help them interpret records, provide knowledge that empowered them, and locate information. Others, however, suggested that reference archivists guide users too much at times and may cut off interesting lines of inquiry. We need more research on the effect of reference service on the user experience and the impact of reference archivist expertise on the quality of reference service.

Conclusion

This study proposes an ARK Model that highlights three dimensions of knowledge—research, collection, and interaction—needed by reference archivists to provide quality service. What concerns us most are two simultaneous trends: MPLP and the increase of online archival activity (finding aids, digitized collections, etc.). These trends may undermine the collection-based expertise of reference archivists and/or make it inaccessible to an increasing number of remote users. We should continue to investigate the knowledge of reference archivists and better understand how their skills can be maintained in an era of MPLP and how these skills can be transferred most effectively onto the Web. Our goal here has been to tease out the knowledge underlying reference service as a means of highlighting the expertise required for reference archivists to operate in the space between collections and researchers.

Notes

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²⁴ Yakel and Torres, "Archival Intelligence," 51.

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