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This study is a content analysis that investigates whether the user education resources available on the websites of archival repositories reflect an understanding of Archival Intelligence. This was done by analyzing the websites of thirty archival repositories, selected from the list of the member institutions of the Association of Research Libraries. The findings of the study indicate that the websites of most archival repositories do not reflect an understanding of Archival Intelligence. The study also suggests that archival repositories are not currently taking advantage of the Internet as a medium for user education, which is necessary in a time where the only interaction many users have with an archival repository is through its website.

Headings:

Access to Archives

Archives/Automation

Bibliographic Instruction

College and University Archives

Computer-assisted instruction

Internet/College and university libraries

"FINDING WHAT, YOU KNOW?": A CONTENT ANALYSIS OF THE
WEBSITES OF ARCHIVAL REPOSITORIES FOR MARKERS OF ARCHIVAL
INTELLIGENCE

by
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Introduction

The Internet has brought new types of researchers to the virtual door of archival repositories. Genealogists, family historians, undergraduate students, and others have begun to access the information contained on the websites of archival repositories from afar, doing much of their research off-site. The rise of new groups of more independent researchers requires that archivists rethink their current user education practices.

Elizabeth Yakel and Deborah Torres, in their article “AI: Archival Intelligence and User Expertise,” have developed a “model of researcher expertise” and discuss “how this model might be incorporated into archival user education.” (Yakel and Torres 2003, 52) The work of Yakel and Torres on Archival Intelligence can be read as a practical educational program for turning novice researchers into more expert archival researchers.

Archival user education has long centered around the group instructional session. In these sessions, which are typically scheduled by university faculty, archivists teach college students how to perform archival research in a specific repository. While these sessions remain important, they are no longer sufficient to reach all researchers. In

order to educate all users of archival repositories, archivists must reach out to their new users where they are interacting with the archivists: through the website.

In order to adapt to this new landscape of user education, new resources are necessary. Archival Intelligence is a model for teaching new users of archival repositories how to become expert users of archival repositories. Instead of explaining to new users the ins and outs of a particular institution, Archival Intelligence strives to give them a “general framework” of how to use archival repositories and their archival and manuscript materials in general.(Yakel and Torres 2003, 54) The current study aims to investigate what user education resources are currently available on the websites of archival repositories, whether or not these resources reflect an understanding of Archival Intelligence in their content, and whether the concept of Archival Intelligence is teachable on the Internet.

Literature Review

Archival Intelligence

The concept of Archival Intelligence takes the information that archivists have discovered about their users and creates a new educational system from it. Instead of concentrating on the expert users of archival repositories, the ones who are most likely to interact with archivists, Archival Intelligence focuses on the process of turning

novice users of archival repositories into expert users. Also, instead of focusing on teaching researchers how to use one particular repository, Archival Intelligence focuses on teaching them how to use any archival repository.

There are three components to Archival Intelligence:

“knowledge of archival theory, practices, and procedures; strategies for reducing uncertainty and ambiguity when unstructured problems and ill-defined solutions are the norm; and intellectual skills, or the ability to understand the connection between representations of documents, activities, and processes and the actual object or process being represented.” (Yakel and Torres 2003, 54) If archivists are able to teach new users these three elements before the users attempt to conduct research in a repository, the archivist will be able to concentrate on helping these users find the information most pertinent to their research and not spend their time orienting the user to archival research in general. Researchers will also be more comfortable, less ill at ease, and more focused on actually conducting their research, rather than dealing with the clutter of details that could be a barrier to success.

The first component of Archival Intelligence is knowledge of archival theory, practices, and procedures. This refers to the “facility to understand archival jargon, an internalization of rules so that they do not get in the way of higher-level thinking, interpretation of

primary sources and their surrogates, and an awareness of one's own and others' level of domain knowledge."(Yakel and Torres 2003, 58)

In this area, "archival terminology [has] proved the greatest barrier."(Chapman 2009, 18) Jargon, while a term primarily used in a pejorative manner, is essential to a profession. In the *Glossary of Archival and Records Terminology*, it states that archival "terminology serves to mark the current limits of professional concerns and responsibilities."(Society of American Archivists) However, this terminology proves to be problematic for some users. In a usability study done by Joyce Chapman on the finding aids at Southern Historical Collection at the University of North Carolina at Chapel Hill, "complaints about terminology were one of the largest issues that arose."(Chapman 2009, 34) For example, the participants "falsely assumed that the term 'additions' implied material created at a later date than the bulk of the original deposit, instead of material added to a collection at a date later than the original accession."(Chapman 2009, 35) "'Series' and 'sub-series' are terms that are relevant in archival description, but which may be unclear to users."(Chapman 2009, 39) Even the term "finding aid" is one that is hard to understand. In an interview conducted by Elizabeth Yakel, one respondent said that "'finding aid' is still foreign to me. Finding what, you know."(Yakel 2002, 117)These terms are important to archivists and need to be retained, even if they are confusing to those

unfamiliar with archival jargon.

Archival jargon is specific and complicated: often words that have one definition in popular usage have a different or more specific meaning in the archival context. There are also a plethora of terms that all refer to approximately the same concept. For example, “terms used for finding aids included 'guides,' 'finding guides,' 'bound collection of indexes,' and 'bound journals.'” (Yakel and Torres 2003, 64) Also, there is a lack of glossaries or dictionaries of archival terminology that are aimed at novice users; the *Glossary of Archival and Records Terminology* is primarily designed for archival professionals by archival professionals.

Another component of archival theory, practices, and procedures is the internalization of rules. People are able to use libraries effectively because there is almost a cultural knowledge of how one should act in a library. There is no cultural consensus regarding archival repositories and this gap in social understanding can fluster new users. When a user first comes to an archival repository, “attention is focused on the rules and not on thinking through the research problem.” (Yakel and Torres 2003, 66) Teaching new users rules, procedures, and handling is a vital part of acclimating them to using archival materials; however, this process of learning rules for each individual repository can easily get in the way of the researchers intended goals. Rules need to be internalized so

that they can inform a researcher's actions without hindering their higher thinking.

The second major component of Archival Intelligence is a user's strategies for reducing uncertainty and ambiguity. In practice, this refers to the user's search skills. Without an understanding of archival terminology and the archival reality that these terms reflect, it is difficult for users to be able to search for the material that they need. If users are "unable to conceptualize archives, there is an ensuing uncertainty...as to the boundaries of the search for primary sources."(Yakel 2002, 116) Users tend to think in terms of subject matter instead of by physical format. People, for the most part, know what types of materials are contained in a library; they have not yet made that same step for archival repositories. For example, a researcher "interested in political records...began in a government documents section of a research library"(Yakel 2002, 116) instead of looking for political records in an archival repository.

If users do not know the types of materials that are contained within an archival repository, then they will not know how to search for them. Christopher Prom found that "many novice users did not know where to begin searching" when conducting research in an archival repository.(Prom 2004, 253) In addition, Krause writes that "search strategies for locating primary sources in a local catalog and on the Web are less frequently included in instruction

sessions.”(Krause 2008, 244) Since most archival repositories are contained within libraries and most archivists are trained in schools of library science, many users come to archival repositories with the mindset they can search for archival materials in the same way that they search for traditional library materials. Many of the complaints about the search systems provided by archival repositories come from the fact that the user's “searching paradigm [is] library based and the finding aids violate their expectations.”(Yakel 2002, 117)

Part of the problem that users face when searching for archival material also arises from the design of archival search systems. Most users are now fairly familiar with Google searching and are taught how to use traditional library OPACs during their time in high school or as an undergraduate. When attempting to search for archival materials, “many participants ran into problems when search engines did not use expected conventions.”(Prom 2004, 254) There are a variety of search systems that are used by archival repositories: some use the library OPAC, some use a Google Syndicated Search of their finding aids, some use an information management system such as Archon, some only allow a user to browse the titles of the collections on a static webpage, and some have no ability to search collection information online at all. Whereas library search systems are typically fairly similar, archival search systems can be widely diverse.

The third component of Archival Intelligence is intellectual

skills, or the ability to understand the connection between a representation of documents and the documents themselves. A lack of intellectual skills is often seen when users are interacting with finding aids. The major association that researchers have to make is “between representations of primary sources and the actual materials.”(Yakel and Torres 2003, 59) When users first interact with online finding aids, many think that “any hyperlinks in finding aids...lead to scanned copies of documents.”(Prom 2004, 247) In particular, researchers do not make the association between the physical items and the “finding aids, MARC records, and on-line finding aids”(Yakel and Torres 2003, 60) that try to guide users to the physical materials. However, this is one of the easiest gaps in Archival Intelligence to fill. Chapman found that “if given the proper information, novice users can quickly and correctly identify what finding aids represent, as well as the non-digital nature of materials” that they are typically used to describe.(Chapman 2009, 19)

How to begin the process of historical research is also an important part of intellectual skills. Novice users often come to an archival repository “lacking...a well-defined research strategy.”(Yakel and Torres 2003, 74) These skills are often taught to fledging historians as part of their coursework; however, new users of archival repositories may not have the same sort of background and education.

Current Archival User Education

Despite the rise of the Internet as one of the primary locations of information exchange, it is largely unrepresented in the current literature on archival user education. Current archival user education is primarily focused on teaching college undergraduates how to use a particular repository for a particular class or assignment. One of the primary terms currently used for “archival researcher education is 'archival orientation.'” (Yakel 2004, 63) Orientation, as a term, implies a “paradigm focusing on a physical tour of the facilities as the necessary preparation to facilitate use of the archives of manuscript collection.” (Yakel 2004, 63) The current literature on archival user education concentrates on the ways that instructional sessions can support the class objectives of the professors on a particular campus. As Allison writes, “[u]ndergraduate use of the collections supports the educational mission of universities and their libraries.” (Allison 2005, 43) Given this primary responsibility, the instruction that archivists have traditionally given to these classes has been focused and pragmatic. When a class comes to an archival repository, it is usually a combination of the instructor and the archivist who give the orientation. When giving an assignment that requires the use of primary sources, “instructors are not concerned about interacting with the archives or manuscript collections as a whole, nor are they explicitly interested in having the students learn about generalized

research techniques in archives and manuscript collections.”(Yakel 2004, 62) The instructors want their students to have the experience of interacting with primary sources to give them a physical link with history; however, they are not always concerned with giving their students the tools to find these primary sources on their own. During these orientation sessions, archivists necessarily must focus on the class and assignment at hand. This can often leave little time to try and impart more generalizable information about archives and manuscripts.

This model of user education is based on the archivist supporting the needs of professors and their classes. Greg Johnson writes that the archivist “should discuss some of the materials she/he has pulled, giving brief descriptions of the items and mentioning their historical significance” and that it is this sort of show-and-tell “that will most likely demonstrate the usefulness of archival materials to students.”(Greg Johnson 2006, 95) Furthermore, this method of “instruction is usually related to an assignment, lasts about an hour, and is tailored to a smaller class.”(Krause 2008, 235) This works well for the purposes of the instructor, who is trying to give the class a physical link to history outside of their textbooks. These instruction sessions primarily concentrate on “procedural information rather than conceptual knowledge,” with the focus on “handling the documents, requesting materials, and departmental rules.”(Krause 2008, 235,

243) These issues, especially the latter two, are the most institution specific and the least generalizable. At all repositories there will be procedures for requesting materials and specific rules; however, they will be different between individual repositories. Students may be unable to transfer the skills learned in a particular instructional session to a different archival repository.

Teaching the importance of primary sources and the specifics of how to act in a particular repository are important and necessary goals; however, it is also essential to teach students and others researchers who may not have access to instructional sessions how to perform research in any archival repository. In this respect, library user education provides an interesting model. Within academic libraries, the emphasis is on “assist[ing] patrons in finding information anywhere in any format, and aid[ing] them in developing their own searching techniques to enhance their knowledge.”(Yakel 2004, 63) This is a model that archival repositories must copy. As Helen Tibbo writes, “repositories must move beyond provision of access and bibliographic instruction. Time and other resources must be allocated to user studies, user education, and especially, outreach within repository budgets.”(Tibbo 2003, 29) Archival repositories must make this change: instead of teaching users only how to use a particular repository, they must teach their users Archival Intelligence. It seems that in-house instructional sessions are not the

only place for teaching new researchers how to use archival repositories. Given the fact that contact with many researchers is increasingly or even primarily a virtual event, it seems foolish to limit attempts to teach Archival Intelligence to the physical structures that repositories inhabit.

User Studies

In order to know what gaps in users' knowledge need to be addressed, archivists must first study these users. In recent years, archivists have begun to systematically study the users of their repositories. In 1986, Paul Conway proposed a framework for studying the users of archival repositories in order to inaugurate a "comprehensive, profession-wide program of user studies." (Conway 1986, 394) Conway found that "without direct and continuous user evaluations, archivists can only suppose that their information needs are being met on a regular basis." (Conway 1986, 405) Before this, archivists thought that they did not really need to study their users systematically since they already interact closely with their users. The traditional method of gathering information about the users of archival repositories has been through "interacting with users at the reference desk and in the reading room, answering reference letters, reading historical research, attending historical and/or genealogical conferences, and reviewing their archives registration data." (Duff and

Cherry 2008, 499) While this can give archivists valuable information, it only covers a subsection of users. It cannot account for users that do not want to talk to archivists or for users whose only interaction with the repository is online. For example, in their study of the information seeking behavior of genealogists, Duff and Johnson write that “archivists would give specific answers to specific questions, but often what [genealogists] needed is an overview of how material is organized in the archives itself.”(Duff and Catherine Johnson 2003, 89) Gathering information through anecdotal interactions with users focuses on the users who already know how to use archival repositories and ignores users whose anxiety prevents them from telling archivists that they do not know how to use an archival repository.

Users of archival repositories who interact with the repository only through the Internet are in particular need of user education resources. Since the rise of ubiquitous access to the Internet, archival repositories have made finding aids available online. Researchers can now “visit archives virtually, identify interesting holdings, search databases and download information seamlessly at any hour.”(Yakel 2004, 61) The old method of user education, focusing on the classroom and in-person instructional sessions, is no longer enough. In their study of e-mail reference questions, Wendy Duff and Catherine Johnson found that what they classified as “user education”

requests represented 13% of the total number of e-mails sent to archival repositories.(Duff and Catherine Johnson 2001, 55) Placing user education materials on the Internet could help reduce these emails and allow researchers instant and long-distance access to educational materials.

Raising novice users' Archival Intelligence is thought to be the way to create expert users of archival repositories. However, in-person instructional sessions do not have the time to be able to fully teach Archival Intelligence. The goal of this study is to investigate whether or not archivists have taken advantage of their websites as a tool for teaching Archival Intelligence.

Methodology

This study measured the presence of aspects of Archival Intelligence on the websites of archival repositories by using content analysis. Various markers for Archival Intelligence were coded and defined in a codebook. The full codebook (Appendix B) was developed to operationally define the categories of Archival Intelligence and was iteratively revised.

Concepts	Markers
Archival theory, practices, and procedures	Rules, handling information, terms, reproduction information, publication information, definition of an archive
Strategies for reducing uncertainty and ambiguity	How to search the library catalog, how to search finding aids, how to

	search either the catalog or finding aids, description of subjects held, description of formats
Intellective skills	Definition of a finding aid, how to conduct research
Contact information	Hours, directions, email contact, IM/chat, phone contact, mail contact
Formats	Central education page, videos, in-person instruction, none

Figure 1: Abbreviated codebook

Latent content analysis measures concepts that “cannot be measured directly but can be represented or measured by one or more indicators.”(Neuendorf 2002, 23) It was chosen to be the primary method of analysis as it traditionally has a higher degree of validity than manifest content analysis, which mechanically counts the occurrence of various terms.

The current study determined whether or not the website of the archival repository contained the various markers found in the codebook. The information was then recorded in an Excel spreadsheet. Only information that appeared directly on the website of the archival repository was considered; information appearing on the website of library in which the archival repository is contained was not measured unless this information was specifically linked from the website of the archival repository.

The current study used stratified random sampling to select the websites of archival repositories to analyze. The population chosen

was the list of the member institutions of the Association of Research Libraries. This subsection of academic libraries was chosen as they “make up a large portion of the academic and research library marketplace, spending more than \$1 billion every year on library materials.”(Association of Research Libraries) These institutions, more than any others, have the resources available to institute programs that teach Archival Intelligence. The sample was limited to English language websites and repositories that are attached to an institution of higher learning; therefore, institutions such as the Library of Congress and the library of Université Laval in Quebec were excluded. Each of the institutions was given a number, ranging from 1 to 124. Then, the random number generator maintained by the School of Computer Science and Statistics at Trinity College in Dublin, Ireland selected the thirty institutions that were surveyed (Appendix A). A sample size of thirty was chosen because it is twice what Neuendorf found to be the sample size necessary to “adequately represent the population in general.”(Neuendorf 2002, 89)

The three main aspects of Archival Intelligence, which combine to form the cornerstone of this survey, are: archival theory, practices, and procedures; strategies for reducing uncertainty and ambiguity; and intellectual skills. To these was added a fourth category, that of contact information. This category refers to information such as hours of operation, directions to the repository, email addresses,

phone numbers, and other information that is useful to patrons but not necessarily a part of Archival Intelligence. This category was added to see if repositories are giving their users at least enough information to be able to begin their research.

Finally, the explicit format used to convey the online instruction was also investigated. This category measures the existence of central educational pages, video tutorials, instructions for how to schedule an in-person instructional session, or if there was no information relating to opportunities for instruction on the website.

Results

This analysis shows mixed results for the type and availability of Archival Intelligence resources on the websites of archival repositories. While most repositories did have aspects of Archival Intelligence on their websites, some of the most important aspects were absent from the website of almost every archival repository.

Archival Theory, Practices, and Procedures

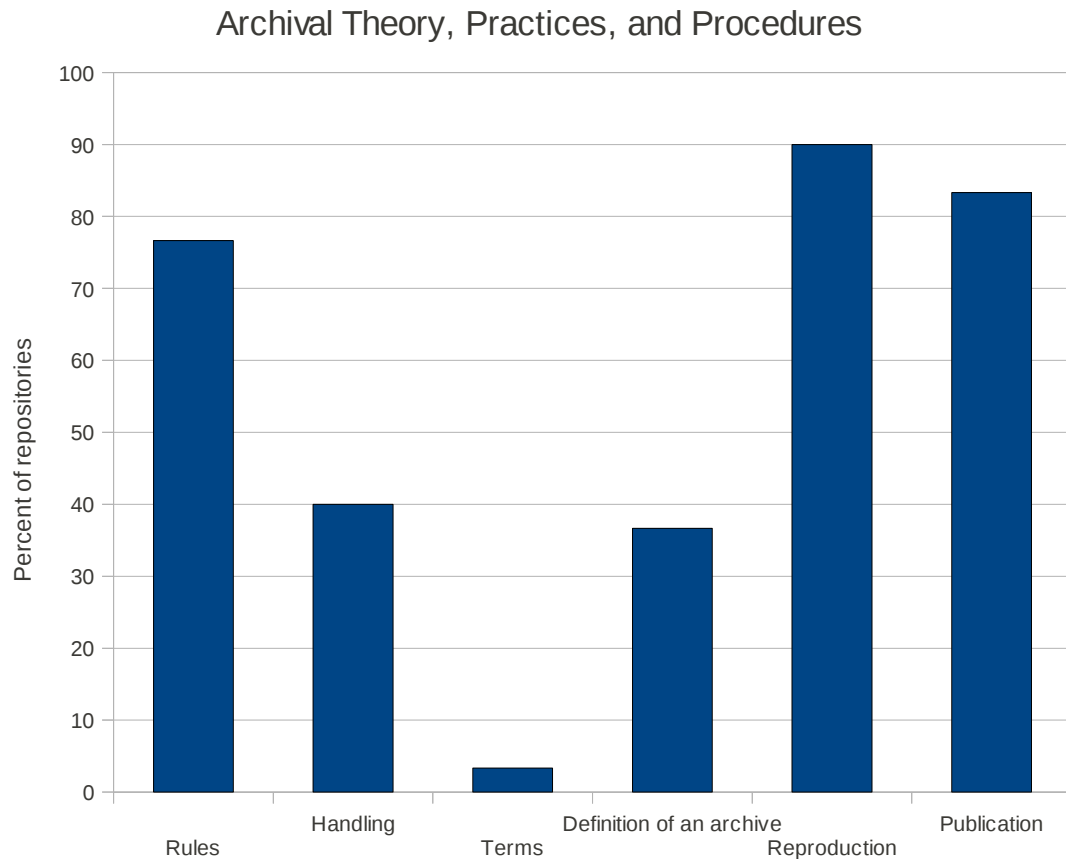


Figure 2

The repositories surveyed had a great deal of difference on addressing matters of archival theory, practices, and procedures. Overall, it seems that archival procedures seem to be well represented, while theory and practice are less frequently featured. Ninety percent of repositories surveyed had information on how to procure reproductions of their archival material and 83% of the repositories had information about conditions for the publication of these archival materials in works produced by the researcher. Information on how to procure reproductions primarily consists of the

price schedules and the forms required to order copies. Information on publication primarily consists of a notice requiring the patron to respect the copyright held over the reproduced materials as well as fees for commercial usage. Finally, 77% of the repositories surveyed have a list of rules for using the materials found in that archival repository. These rules include lists of items that may be brought into the reading room, how to register at an institution, and how to request materials for viewing.

On the other hand, some key markers of this aspect of Archival Intelligence are not found on many websites of archival repositories. Only 40% of repositories have any guidelines for how to handle archival materials in the reading room, beyond telling their users to handle the materials “with extreme care.” Only 37% of repositories define what an archival repository actually is; out of these repositories, only one defines what an archival repository is in general terms rather than defining the purpose of that particular repository. The one repository that defines what an archival repository is in general terms is also the only archival repository that has a list of terms frequently found on the websites of archival repositories and their definitions.

Strategies for Reducing Uncertainty and Ambiguity

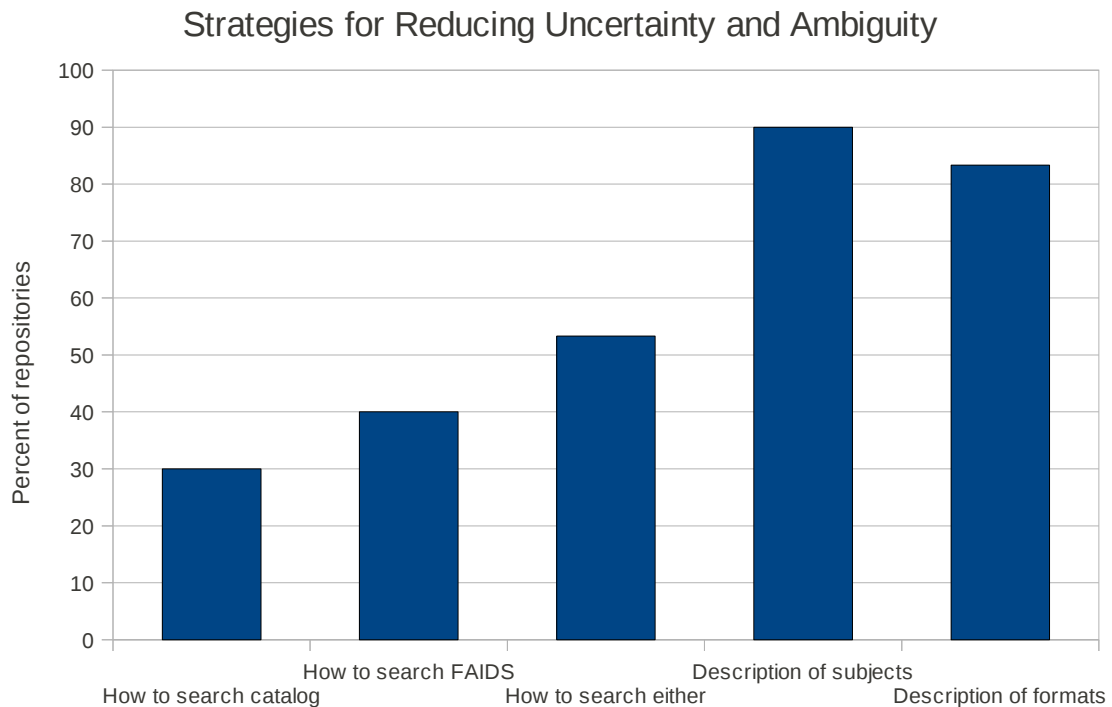


Figure 3

Strategies for reducing uncertainty and ambiguity refers to the patron's search skills. This does not simply mean their ability to use a search engine; it includes teaching users how to search specifically for archival material. Teaching users how to search finding aids and the library catalog are part of this process; however, it also includes teaching the user the different types of formats found in the repository as well as the different subject matters held by the repository.

Descriptions of formats held by repositories and descriptions of subject matter held by repositories are found on the websites of most of the repositories surveyed. Ninety percent of the repositories had

information about the subjects they hold. This information is often given in a bullet-point list or in a collection development policy.

Eighty-three percent of the repositories surveyed also had information about the various formats of materials found in their collections. This information is necessary because it allows the patron to know what to expect when they come to do their research. A researcher would use a primarily photographic collection in a far different way than they would use a collection that consists of corporate records.

However, search strategies are only taught by half of the repositories surveyed. 30% of the repositories surveyed had instructions for how to use the general library catalog to search for archival material. These instructions generally consist of information on how to limit the catalog search to only archival material. 40% of the repositories surveyed had instructions for how to search the finding aids found on their website. These instructions include information on how to use a search engine and information on how to use a web browser's built in search function (CTRL+F) once a patron had reached a finding aid. Together, only 53% of repositories surveyed have instructions for how to search either the library catalog or finding aids, meaning that 47% of repositories surveyed have no instructions for searching their collections whatsoever.

Intellective Skills

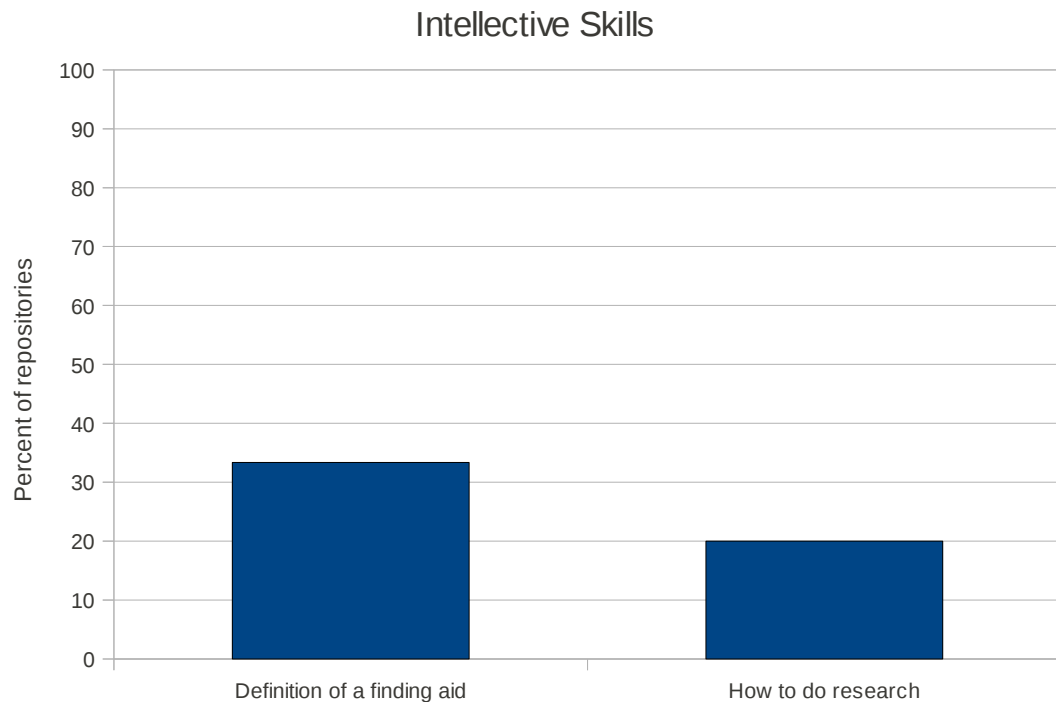


Figure 4

Intellective skills are often ignored on the websites of archival repositories. Only 33% of repositories surveyed give a definition of a finding aid. Definitions of finding aids include such descriptions as “extended table of contents” or “inventories of collection content.” Most repositories, however, use the term finding aid while expecting their patrons to already know what that term means.

Only 20% of repositories surveyed give instructions on how to perform the process of research. While historians are taught how to perform research, new researchers that are coming to archival repositories are not necessarily taught this process. Some archival repositories have begun to teach their users how to perform historical

research. For example, Auburn University has a guide on how to perform genealogical research; it includes what information the researcher needs to possess before entering an archival repository, where they should look for new information, and what kind of information they should expect to find over the course of their research.

Contact Information

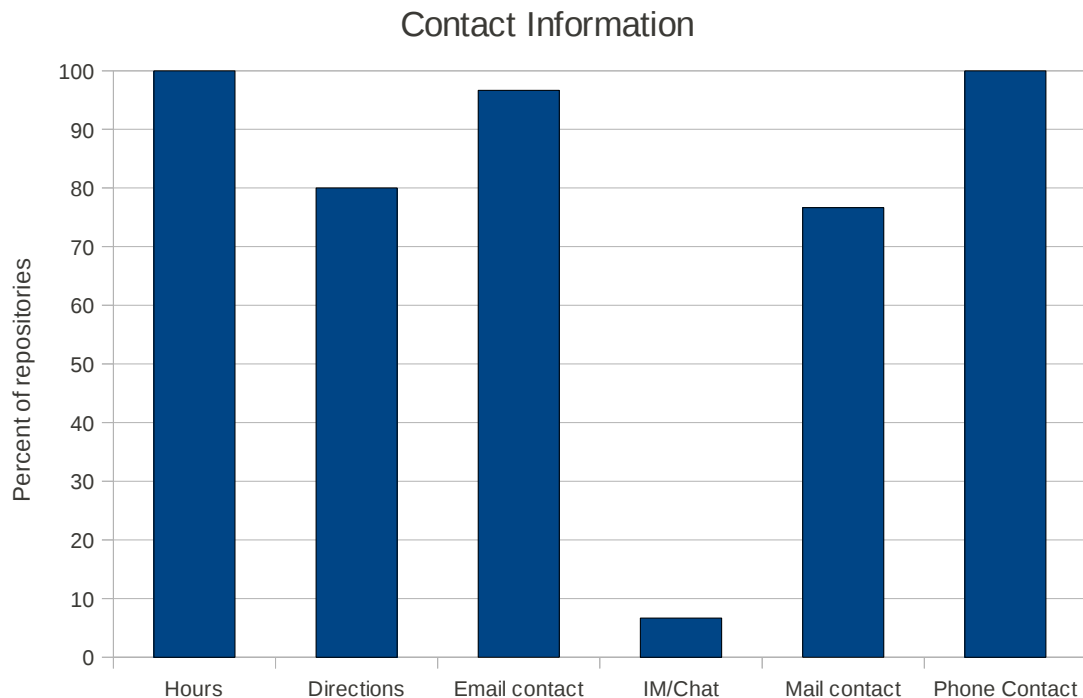


Figure 5

Contact information was investigated to see if a researcher could get in contact with the repository should they need more information than what was provided on the repository's website. On this, repositories did very well. One hundred percent of repositories

had their hours and a phone contact number listed on their website. With these two pieces of information, a potential researcher would be able to contact the repository and questions. Also, 97% of the repositories surveyed had either a general reference email address listed or the emails of staff members of the repository.

Other contact information occurs only slightly less often. Eighty percent of the repositories surveyed had information on directions to the repository from off-campus. Seventy-seven percent of repositories surveyed provide a mailing address so that people could send letters or packages to the repository. The only form of communication that most websites surveyed did not possess was the ability to instant message. Only 7% of the websites surveyed had instant messaging available on their website. All of these websites had the instant messaging service available as a widget embedded into the website, so that researchers could talk to archivists directly in their browser instead of having to use instant messaging client software.

Format of User Education

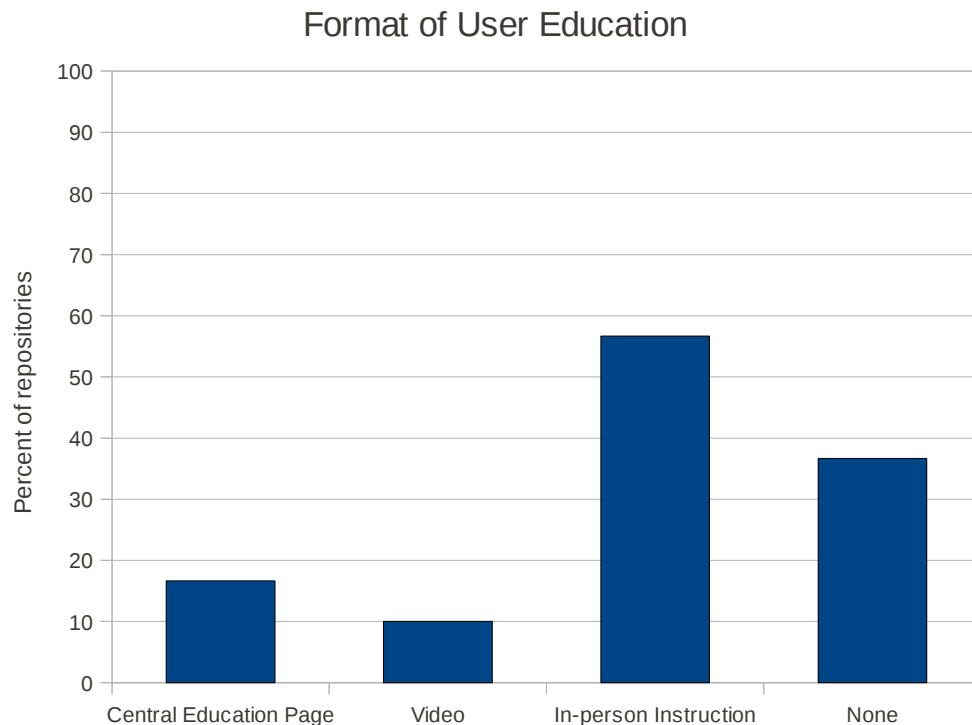


Figure 6

The final element that was measured was the explicit form of instruction suggested by the website. This category measures the existence of central educational pages, video tutorials, instructions for how to schedule an in-person instructional session, or if there was no information relating to opportunities for instruction on the website.

The most common format for instruction explicitly stated on the websites was that of in-person instruction, which was featured on the websites of 57% of repositories. This primarily consists of instructions for professors at that university on how to schedule an instruction session for their class. One repository also offers in-person instructional sessions for researchers who are not enrolled in

classes at that university, but tells them to email the archivist for more information.

The second most common explicit instruction format is “none.” Thirty-seven percent of the repositories surveyed have no mention of instruction or user education whatsoever on their websites. The other two formats are even rarer: only 17% of repositories surveyed have a central education page on their website and only 10% have video tutorials on their website. A central education page is a page on a repository's website that is explicitly designed to teach people how to use an archival repository and video tutorials are videos designed to do the same.

Discussion

Archival Theory, Practices, and Procedures

The results in the area of archival theory, practices, and procedures are mixed. The information that most of the repositories featured on their websites, information about rules, reproductions, and publication of information found in the repository, is some of the most requested and most important information sought by users. As Duff and Johnson found, service requests, such as requests for photocopies or interlibrary loan services, are the most common email requests.(Duff and Catherine Johnson 2001, 55) Making this information available online may partially be an attempt to cut down

on the number of emails about rules and photocopies.

However, information that is conceptual in nature and does not relate to a particular service offered by the repository does not feature on the websites of archival repositories. Instructions on how to properly handle archival material, beyond the words “with extreme care,” are hard to find. Even when they do exist, this information is usually found within the statement of rules of the repository and not given its own section. Pulling this information out of the rules and giving it a unique header is an easy change that can help alleviate this problem.

Terminology remains one of the primary sources of confusion that patrons face and only one repository surveyed actually had a list of frequently used terms and their definitions. Pointing patrons to the Society of American Archivists Glossary is not sufficient, as that glossary is designed for archives professionals and not the general public. However, this does not have to be a difficult task. The University of North Carolina at Chapel Hill's Southern Historical Collection has recently created a list of commonly used terms and their definitions, specifically designing the definitions so that they would be understood by an undergraduate student with no previous experience in an archival repository. This process was actually useful for the archivists as well, as it allowed archivists to take a step back and think about the words that they use from a different perspective.

Defining archival terminology in a manner that patrons can understand is one step towards breaking down the seemingly impossible barrier that patrons face when attempting to do archival research.

Strategies for Reducing Uncertainty and Ambiguity

Strategies for reducing uncertainty and ambiguity are the group of skills that allow users to search for material that fits their research needs. This aspect of Archival Intelligence has been greatly helped by the advent of the Internet and the rise of search engines such as Google. Most of the websites that have full text search available for their finding aids do not have any instructions on how to use this search box. The websites that did have explanations of how to use search engines mostly taught users how to perform Boolean searches. Boolean searches are rarely used in modern search engines, since they are complicated and hard to format; however, they can allow for a more precise search if used correctly.

Another aspect of strategies for reducing uncertainty and ambiguity, knowing the bounds of what can be found in a certain repository, is already well represented on the websites of archival repositories. Description of the formats held by a repository and description of subjects held by a repository is crucial to allowing a user to know for what they will be able to search.

Explicit instructions on how to search for archival materials are more important when the library's catalog is the primary location of collection information. Instructions on how to limit a search of the general library's catalog to only return archival materials in the results is vital if researchers are to be able to use the catalog as a tool for locating archival material. Also, an explanation of what type of information can be found in a catalog record is necessary, although not often provided. Different levels of information can be found in a catalog record and a finding aid, and so a different search strategy is required. Adding this information is a quick fix that will allow the user to more effectively search for material relevant to their research.

However, many repositories still do not have any sort of search feature available on their website, requiring their users to browse through lists of finding aids or providing no collection information whatsoever. The collections in these repositories require the consultation of reference archivists to be of any use; browsing the titles of collections available in a repository is useless for a researcher unless they already know for what collection they are looking. Repositories with finding aids available online that do not have the ability to search these finding aids are especially useless. Creating electronic finding aids can be difficult, especially if there is no institutional history of doing so. However, if an institution can create electronic finding aids then adding a search feature should not be

difficult.

Intellective Skills

Teaching intellective skills is important since more and more researchers are not professional historians. On this front, the repositories surveyed did poorly. The main example of intellective skills, defining the meaning of the term “finding aid,” only appeared on the websites of 33% of the repositories surveyed. Not only is this a problem of jargon, but it is a problem of conceptualization. Many researchers do not know the purpose of a finding aid; anecdotes float about archivists who receive emails from patrons asking why a folder does not open and present the materials within when they click on it in a finding aid. A simple definition of the scope and purpose of a finding aid will easily cure this problem.

However, an even bigger problem than not defining the term finding aid is the fact that only 20% of repositories surveyed have information on how to conduct historical research in general. This was not a problem when almost all of the users of archival repositories were historians and people studying to become historians; however, this has now changed. Genealogists, family historians, undergraduate students, and other new researchers have begun to use archival repositories in increasing numbers. Archivists do not have to create an individual guide for each new category of

researchers. A general guide that gives an introduction to the process of historical research would greatly benefit new researchers.

Contact Information

Contact information is the basic information that allows a researcher to consult a repository. While not specifically a part of Archival Intelligence, it allows for a patron to contact an institution should they have any questions. The most basic level of contact information is the hours that the repository is open and the phone number of the repository. One hundred percent of repositories surveyed have at least this information, which allows for researchers to contact the repository if their informational needs are not satisfied by the content of their websites.

The two classic locations of interaction between the archivist and the researcher are mail and, more recently, email. The vast majority of websites have both of these resources available. Mail and especially email remain the primary place where researchers look to contact archivists when they have educational needs.

Only 7% of repositories surveyed had an instant messaging service available on their website. This is a complicated area, since many libraries now feature instant messaging on their websites while archival repositories, for the most part, do not. It is unfeasible as a medium for reference requests to be answered, as an archival

reference request takes too long to be answered in this medium. Instant messaging could become the first point of communication between archivists and researchers, where questions about the location of information could be answered. If a question is more complicated, the archivist could request that the researcher send an email in order for their request to be more fully answered. This is an area that requires more research.

Format of User Education

Current archival user education resources focus on scheduling in-person instruction sessions. Fifty-seven percent of repositories surveyed have information on their websites on how a professor can schedule an instructional session for her class. It is likely that most of the 43% of repositories that did not have information on their websites about scheduling instructional sessions still have instructional sessions. In these cases, it is likely that the archivists either reach out to professors or professors contact the archivists through means other than the website.

However, only 17% of repositories surveyed have an explicit user education page on their website. Out of these repositories, less than half have a link to the user education page directly on the repository's homepage. Thirty-seven percent of the repositories surveyed have no user education information whatsoever available on

their website, not even information on how to schedule an in-person instruction session. With the majority of researchers interacting with archival repositories only through the Internet, this number must change. Not only will this help educate the user, but it will reduce the time that archivists spend teaching the same concepts to new researchers over and over, allowing them to spend more time helping these researchers find the materials that best suit their needs. While the instructional session is still a valuable tool, archivists must capitalize on the power of the Internet.

The website of George Washington University's Special Collections Research Center seems to adhere quite closely to the principles of Archival Intelligence. On their main page there is an instant messaging widget, which allows a researcher to contact the reference staff instantly should they have any questions. They have a tutorial for primary sources, explaining what primary and secondary sources are, how to locate primary sources at George Washington University, how to locate archival materials at other repositories, and how to cite archival materials in published works. George Washington University also has a list of commonly used terms and their definitions, the only repository surveyed to have such a list. Their list was adapted from the *Glossary of Archival and Records Terminology*, created by the Society of American Archivists; this represents a model that could be used by other repositories. Adapting existing resources,

with permission, to fit the needs of a particular repository could be a way to quickly and easily create user education resources that reflect Archival Intelligence.

Conclusion

The current survey was designed to discover whether the content of the websites of archival repositories reflect the theory of Archival Intelligence. Any aspect of Archival Intelligence that has been found on the websites of these repositories has been, for the most part, limited. Even when these aspects can be found on the websites of archival repositories, they are spread across the website and not unified into one location designed to educate new researchers.

Currently, archivists are not taking full advantage of the Internet as a resource for user education. Traditionally, the mindset of archivists has been that the researchers who use their collections are trained historians who know how to perform historical research. However, with ubiquitous access to the Internet now available, new users are finding their ways to the virtual door of archival repositories. Genealogists, family historians, undergraduate students, and other new researchers who thought that archival research was the domain of only the professional historian are now using these repositories in unprecedented numbers. These new users need to

receive training at their point of entry into the world of archival research: the repository's website.

Since many new users of archival repositories are not getting a PhD in history nor are they a member of a class that has an assignment to use archival materials, the website is most likely the first and only interaction they will ever have with this repository. If archivists can make this interaction an educational one, one where new researchers actually learn Archival Intelligence, they will not only help their own institution but also help any institution at which this person does research in the future. Websites are a good medium to convey certain types of information, such as definitional information. Lists of terms, rules, guidelines for reproduction and publication, descriptions of subjects and formats held by a repository, the definition of a finding aid, and contact information can all easily be published on a website and become a resource for researchers.

However, the static webpage is not the best medium for teaching all aspects of Archival Intelligence. The process of performing historical research is difficult to teach online. This is usually the province of history teachers and professors, not archivists. Learning how to search for relevant information is also a difficult one to teach online. Search engines such as Google have made this process easier, but without a conceptualization of archival repositories and how to perform historical research in general, it is still hard for

people to be able to search for archival material. These aspects of Archival Intelligence may still require in-person instruction for many people. Further research into users' needs are necessary to know what additional user education resources would be useful to researchers and usability studies on archival websites are needed to truly know what aspects of the websites of archival repositories researchers are actually using.

Each repository does not need to create their own set of user education tools. Archivists should look regionally and create a set of tools that can be used across various institutions. Handling guidelines, terms and their definitions, and how to perform historical research are all items that are not institution specific. These resources can be created by various universities in a region and then linked to by others. It just requires archivists to decide that they want to meet their new researchers at the place where the researchers meet them: the website.

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Appendix A: List of Institutions Surveyed

Name of library	Special Collections Website
Auburn University Library	http://www.lib.auburn.edu/sparc/
Brigham Young University Library	http://www.lib.byu.edu/sites/sc/
Cornell University Library	http://rmc.library.cornell.edu/
Florida State University Libraries	http://www.fsu.edu/~speccoll/
George Washington University Library	http://www.gelman.gwu.edu/collections/S-CRC
Georgetown University Library	http://www.library.georgetown.edu/special-collections
Ohio State University Libraries	http://library.osu.edu/sites/rarebooks/
Ohio University Libraries	http://www.library.ohiou.edu/archives/
Oklahoma State University Library	http://www.library.okstate.edu/scua/index.htm
Princeton University Library	http://www.princeton.edu/~rbsc/
Purdue University Libraries	http://www.lib.purdue.edu/spcol/
Rutgers University Libraries	http://www.libraries.rutgers.edu/rul/libscua/scua.shtml
Southern Illinois University Carbondale Library	http://www.lib.siu.edu/departments/speccoll
Syracuse University Library	http://library.syr.edu/find/src/
Texas A&M University Libraries	http://cushing.library.tamu.edu/
Texas Tech University Libraries	http://swco.ttu.edu/
University at Albany, SUNY, Libraries	http://library.albany.edu/speccoll/
University of Arizona Libraries	http://speccoll.library.arizona.edu/
University of California, Irvine Libraries	http://www.lib.uci.edu/libraries/collections/special/
University of California, Los Angeles Library	http://www.library.ucla.edu/specialcollections/researchlibrary/index.cfm
University of Colorado at Boulder Libraries	http://ucblibraries.colorado.edu/specialcollections/index.htm
University of Florida Libraries	http://www.uflib.ufl.edu/spec/
University of Georgia Libraries	http://www.libs.uga.edu/hargrett/index.shtml
University of Houston Libraries	http://info.lib.uh.edu/libraries/sca/index

	html
University of Illinois at Urbana-Champaign Library	http://www.library.illinois.edu/rbx/
University of Louisville Libraries	http://louisville.edu/library/archives
University of Manitoba Libraries	http://umanitoba.ca/libraries/units/archives/
University of New Mexico Libraries	http://elibrary.unm.edu/cswr/index.php
University of Virginia Library	http://www2.lib.virginia.edu/small/
Virginia Tech Libraries	http://spec.lib.vt.edu/

Appendix B: Code Book

Archival theory, practices, and procedures:

Rules: Rules for the usage of materials at a repository, including guidelines for registration,

Handling: Instructions on how to handle the materials in the reading room, beyond simply “handle with extreme care.”

Terms: List of archival terms and their definitions.

Reproduction: Information on the process to order reproductions of archival material.

Publication: Information on the requirements necessary to publish archival material.

Definition of an archive: Definition of the purpose of an archival repository.

Strategies for reducing uncertainty:

How to search catalog: Information on how to search the library catalog for archival material.

How to search finding aids: Information on how to specifically search finding aids for archival material.

How to search either the catalog or finding aids: Information on how to search either the library catalog or finding aids for archival material.

Description of subjects held: Description of the subject matter held by the archival repository.

Description of formats: Description of the formats of archival material, such as paper, photographs, and audio-visual materials.

Intellective skills:

Definition of a finding aid: Definition of the purpose and function of a finding aid.

How to conduct research: Information on the process of how to conduct research.

Formats:

Central education page: A page on a repository's website whose purpose is specifically to educate new users.

Video: A video on a repository's website whose purpose is specifically to educate new users.

In-person instruction: Information on how to schedule an in-person instructional session.

None: No explicit information on instruction or user education.

Contact Information:

Hours: The hours which the repository is open for researchers.

Directions: Directions to the repository from off-campus.

Email Contact: Email address or form to contact staff members of the repository.

IM/Chat: Instant messaging to immediately talk with staff members of the repository.

Mail Contact: Address to send letters or packages.

Phone Contact: Phone number to call the repository.