This study describes a usability test of novice and expert users of archival finding aids. The test was conducted to determine whether the use of definitional phrasing, phrases used to explain and differentiate vague terms, in place of standard element titles would improve the navigability of archival finding aids by novice users.

Many studies have indicated that users, particularly novices, do not understand the terms used in archives and their finding aids to describe their materials. This is a serious issue for usability. This study proposed that definitional phrasing in place of standard element titles would improve the navigability of archival finding aids for novice users. The study did not find any demonstrable differences in navigation between the two versions of the finding aid, but recommends that further study be conducted to better understand both how users navigate finding aids and how improvements can be made to reflect these findings.

Headings:

- Archives -- Use studies
- Archives users
- Cataloging of archival materials
- Finding aids (Library resources)
USABILITY EVALUATION OF FINDING AIDS FOR ARCHIVES

by

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A Master’s paper submitted to the faculty of the School of Information and Library Science of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Science in Library Science.

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Approved by

_______________________________________
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Introduction

The three main parts of archival practice are appraisal, description and access. It is becoming increasingly more obvious, however, that archives are not performing well in at least one of these categories. Although archives in the United States are, for the most part, freely available to any interested user, this is not the same as access. Access encompasses not only making materials available for use, but also making it as easy to use as is reasonable. More studies are showing that there is a steep learning curve for using archives, one which many users are too intimidated by. As with “library anxiety” before it, “archival anxiety” is become a larger deterrence for users, particularly new ones.

One of the greatest sources of frustration is the finding aid- the very tool that is meant to help users find what they want. The finding aid is at the heart of archival description, but it was created by and for historians and is often incomprehensible or, at least confusing, to other user groups. The issue is aggravated by the increased usage of web-based finding aids. In the past, when a user struggled with a finding aid in the archives, it was a relatively simple matter for a reference archivist to step in and help them. Now users are looking at finding aids remotely and, if they become confused, do not have easy access to reference archivists. Some of the frustrating characteristics of archives and archival description are fairly unavoidable, since archival materials will never be as easy to find and use as books, but some can be improved upon. Many users
indicate that a great deterrence is the language used in finding aids, particularly the element titles used to indicate different section of the finding aid. This study proposes that:

Hypothesis: Usage of definitional phrasing instead of standard archival element titles will improve navigation of web-based archival finding aids by novice users.

To put it more clearly, the study seeks to find out if users will be able to navigate finding aids more easily if vague terms like “scope/content note,” “abstract,” and “biographical note” are explained and differentiated for the user through phrases that replace these titles. The study will attempt to find out if these phrases improve navigability through usability testing.
Literature Review

Brief History of Finding Aids

Finding aids, inventories, and other tools for archival description were developed as aids to historians seeking to use already existing archives and manuscripts in the research. This development happened during the nineteenth century during the development of the modern historical method (Miller, 1981). Current archival practice, including archival description, has developed out of the mindset of these historians and, in turn, reflects their needs and priorities for conducting research. This means that the emphasis is on certain principles of arrangement, which are reflected in descriptive practice. Most prominent are the principles of *provenance* and *original order*.

In archives, *provenance* refers to “the origin or source of something, or the person, agency or office of origin that created, acquired, used and retained a body of records in the course of their work or life.” (Millar, 2010). *Original order* refers “the order and organization in which records were created, used, maintained and stored by their creator or office of origin.” (Millar, 2010). In practice, these two principles bias archival organization towards the creator, which has its own difficulties for many users. As Frederic Miller states, “it harks back to the leisurely and unhurried methodology of older historical scholarship.” (1981).

Archives and archival description have continued to develop. Although finding aids are generally created along the same principles as ever, greater efforts towards
standardization and usability within these practices have been made. One of the most important new developments in archival development has been the advent of the internet. Prior to the widespread use of online finding aids, most finding aids were paper-based. They were provided onsite at repositories or published in thematic and repository-based guides (Pitti, 1997). Today, most archives produced their finding aids online, but they are essentially the same as their paper-based predecessors in content.

The greatest change has been in the standardization of finding aids across institutions. Online finding aids make it easier for users to navigate through finding aids, but it has also resulted in the development of standards. As a result of these new technologies, finding aids in an online environment “where not only researchers but other archivists can see them have highlighted differences and similarities in practice between repositories and brought to the fore the need for a content standard for finding aids.” (DACS, 2007). The has resulted in the development of content standards, like Archives, Personal Papers Manuscripts (APPM) and Describing Archives, a Content Standard (DACS), as well as data structure standards like Encoded Archival Description (EAD).

One of the first used with finding aids was Machine-Readable Cataloguing (MARC), which is a tool, still widely in use, for encoding bibliographic information for an online environment. This standard does not work well for finding aids, since it relies on specific codes for entry fields, developed from the bibliographic practice of libraries. It does not allow for multi-level description, which finding aids rely on (Millar, 2010). As a result, a new data structure standard to improve sharing of finding aids in an online environment was developed. EAD was developed to bridge the gap between catalogs and finding aids online and thus making finding aids more accessible and shareable (Pitti,
Development of EAD was begun in 1993, the first version was released in 1998, the second in 2002, and the third revision is currently underway.

All of this relates to how archives and archival description has become increasingly more standardized. The focus of this study, however, is on a content standard, rather than on a structure standard like EAD. Once it became easier to create electronic finding aids, the new challenge was to create finding aids that were similar in content and style across institutions. Content standards first developed, as with EAD, out of bibliographic practice. Prior to DACS, *Anglo-American Cataloging Rules* (AACR2) were used for standardizing description. However, these rules were difficult to use and not specific enough (DACS, 2007). Changes were made with the development of APPM, however it was still meant for the creation of catalog records.

DACS grew out of two international standards, the *General International Standard Archival Description* (ISAD(G)) and the *International Standard Archival Authority Record for Corporate Bodies, Persons, and Families* (ISAAR(CPF)). Descriptive standards experts in Canada and the United States began working together in 1999 on what was called the CUSTARD project, or *Canadian-U.S. Task Force on Archival Description*. It eventually became clear that Americans and Canadians disagreed on too many points, which led to the separate development of *Rules for Archival Description* (RAD) in Canada and DACS in the United States (DACS, 2007). DACS includes all twenty-six elements from ISAD(G) while allowing for more flexibility in describing content.

DACS standardizes content in finding aids while also allowing archivists flexibility in deciding how to describe materials. DACS is founded on eight principles,
which espouse a variety of archival principles, including *respect de fonds* and *original order* as well as nuances of the relationship between arrangement and description. DACS defines twenty-five elements, the titles of which are the focus of this study. Not all of the elements are required, but many of their purposes can still be confusing to users of finding aids. As seen here, DACS developed out of archival practice with more regard for historical methods and basic principles of archives rather than out of regard for the users.

**Usability Issues in Archives**

One of the most persistent issues for archives has been the difficulty of making them both accessible and usable to a variety of researchers. Many users, particularly novices, are simply not comfortable using archives. Johnson (2006), borrowing from the literature on libraries, discusses the issue of “archival anxiety”—users are uncomfortable visiting archives and conducting research because the environment is so foreign. The materials cannot be browsed, but instead must be found through a variety of access tools. Once potentially relevant material is identified, the user must request the materials and then use them in facilities with strict rules on handling the materials. Even if the user is comfortable with the restrictions and barriers to access, the materials themselves are also foreign and difficult to use, making it difficult for users to find common ground with the descriptive tools and with reference archivists (Yakel, 2002).

Even the concept of what an archive is causes problems for many users. This is a two-fold problem, partially because the term “archive” has many vernacular uses and also because primary sources are held in a variety of places beyond archives (Yakel, 2002). In the same study, Yakel notes that many people are able “to do research with primary
sources without ever having encountering an archives or an archivist,” which, she suggests, undermines the professional identity of an archive. Regardless of whether this is true or not, users’ inability to even identify what encompasses an archive in the professional sense of the word is indicative of the divide developing between archivists and their targeted user groups.

Many archivists have turned to user education in response to this developing divide. The goal of most archival user education has been to impart knowledge about specific institutions and how they function. In their 2003 study, Yakel and Torres suggest that this is not sufficient and that archivists should also strive to teach users about the terminology used in archives and the way the terms relate to higher-level archival concepts. They argue that the goal of user education should be to impart the user with what they call “archival intelligence,” or the “researcher’s knowledge of archival principles, practices, and institutions…” (Yakel & Torres, 2003).

However, user education alone is not a sufficient solution. As Yakel herself had discovered in an earlier study, many users found that “their archival user education was not memorable. The concepts and skills demonstrated were not embraced and few interviewees were able to transfer them to later projects.” (Yakel, 2002). Different users, particularly non-scholars, conduct research in different ways. Some users, like genealogists, rely on names, dates, places, and other similar topics to conduct their research, rather than the contextual research style of the modern historian (Duff & Johnson, 2003). A uniform method of user education will probably never succeed, since imposing the research methods of one user group onto another will fell unnatural. Users are accessing materials in spite of many of archivists’ services, particularly finding aids,
not because of them, which suggests that further consideration needs to be made in how user education is handled in archives (Ibid.)

Usability Issues with Finding Aids

Finding aids are one of these descriptive tools that are used to bridge the gap between the materials and the user. Archives are complex and finding aids are meant to identify the content and the context of collections (Prom et al., 2007). Unlike libraries, where the materials typically come with the information ready to populate the description, archivists must investigate the materials and represent them as best as they can (Whittaker, 2006). In the end, the main purpose for the finding aid is to act as a representation of the materials, a tool for archivists managing the materials, and a retrieval tool for researchers. (Gilliland-Swetland, 2001).

In practice, the success in these different roles is variable. Many scholars have noted that, generally speaking, finding aids are not satisfying users (Duff and Johnson, 2003; Gilliland-Swetland, 2001; Yakel, 2002). Finding aids work the best for archivists and experienced historians. Finding aids were originally developed during the rise of the scientific approach to history and therefore suit researchers with this mindset the best (Gilliland-Swetland, 2001; Duff & Johnson, 2003). However, many different kinds of researchers use archives, including administrators, students, teachers, and genealogists, and finding aids do not suit their needs nearly as well.

One issue that several studies have noted is that users have difficulty reconciling the relationship between finding aids and the materials they describe, the materials’ place in the broader archive, and how finding aids relate to other representations. In particular,
users have difficulty reconciling finding aids with bibliographic records, especially when the materials themselves are represented in both (Yakel & Torres, 2003). For example, many archives describe their materials using both EAD finding aids and MARC records in the broader library catalog. This can lead to confusion among users attempting to find materials and understand how they relate to the other holdings of archives and libraries.

The success of finding aids with these different user groups is further hindered by the very design of finding aids. Although finding aids are created mainly for the benefit of the user, in the end the needs of the user are frequently subordinated to a variety of archival principles which are frequently in opposition to usability (Prom, 2007). As Prom states, archivists “have been accused, with some justice, of subordinating user needs to an idealized notion of archival objectivity. Finding aids may be meant for users of archives, but their design is not user-centric (Ibid.). This is a major issue, since users are forced to rely on mediatory devices, like finding aids, to access materials, which are typically kept in stacks closed to the public.

As a result, some studies have found that finding aids are users’ least favorite method for accessing materials. Duff and Johnson, in their 2003 study, suggested that users “prefer informal sources of information, such as the archivists, leads from secondary sources, and their own expertise over formal sources such as finding aids.” (Duff & Johnson, 2003). This preference, or lack thereof, varies according to the type of user, but it is still indicative of major issues with the usability of archival finding aids. These are intended to be the primary point of mediation between the user and the materials, yet users are finding them incomprehensible and difficult to use. Finding aids are, admittedly, more complicated than their bibliographic counterparts, but they should...
not be so difficult to use that users are turning to alternative, less formal sources to access the materials.

One of the most frequent complaints about finding aids is that users do not understand the language used in them. Even the term “archive” is confusing and vague to many users (Yakel, 2002). Elizabeth Yakel, in particular, has conducted several studies examining the problems that users encounter when attempting to use finding aids to navigate special collections (2002, 2008). She found that many users, particularly novices, do not understand the jargon that is used by archivists both in finding aids and in reference services. Many users were familiar with parts of the archives and the finding aids, but didn’t know the archival term for them. For example, many users come up with different names for finding aids, with “guides” being one of the most common (2002). Archivists tend to assume that users understand more of the terminology than is warranted, which is the root of the problem which this study addresses.

Similar issues have been found in libraries with the technical terms that are used. One of the important considerations identified with library jargon, or technical terms used within a particular context, is that many of the terms used in libraries are used in other environments with different meanings (Chaudry & Choo, 2001). The same study found that, although many users of libraries are able to correctly define the majority of technical terms used in libraries, they had difficulty or confusion with defining at least one common term (Ibid.). Libraries have the advantage over archives, since most users are exposed to libraries from an early age and are, therefore more familiar with library concepts and the terms used to define them (Johnson, 2006). If users are having trouble understanding the concepts used in familiar environments like libraries, how much more
poorly do users understand technical terms in a relatively alien environment like an archive?

In the past, archivists have responded to user frustrations with finding aids through efforts to educate them on their use. Finding aids were originally designed with the intention that archivists would be able to help users in the reading room and teach them how to navigate them (Gilliland-Swetland, 2001). An increasing number of finding aids, however, are now being placed online and are beginning to disappear from reading rooms. Since the finding aids are being accessed remotely, reference archivist cannot spontaneously recognize a struggling user and step in to assist them (Yakel, 2008). At first archivists thought that users would be hesitant to use online finding aids without the assistance of an archivist to explain concepts, but studies have found that users are accessing them (Altman & Nemmers, 2001). However, just because users are accessing finding aids without the assistance of archivists, this does not mean that they do not need archivists to help them navigate the, admittedly, often complicated finding aids.

If archivists cannot aid users in the reading room and cannot recognize them online, what can be done? Archivists cannot assume that users are coming to finding aids with any prior knowledge or experience. As a result, many archivists have responded that the users must be better educated about archives to make them feel more comfortable (Johnson, 2006). Nevertheless, even with the assistance of a reference archivist there is a very steep learning curve. While historians and scholarly researchers may be highly motivated enough to make the effort to learn archival terminology, many users simply do not have the same level of commitment. If the profession is devoted to open access for
all, we must do more than insist that user needs to learn how we operate; we must also make finding aids more convenient and intuitive to use.

This study advocates the use of definitional phrasing in place of element titles in finding aids. To put it more clearly, the study seeks to find out if users will be able to navigate finding aids more easily if vague terms like “scope/content note,” “abstract,” and “biographical note” are explained and differentiated for the user through phrases that replace these titles. The study will attempt to find out if these phrases improve navigability through usability testing. Users of different experience levels will be given a series of tasks to test their ability to understand element titles and locate items in finding aids. Usability testing tends to be a very reliable method, particularly since very small numbers of subjects can often account for 80% to 90% of the issues in a system (Nielsen, 1993). The study will also attempt to determine if experience levels have an impact on understanding of archival element titles. The assumption, which is supported in the literature, is that users with more experience in archives will perform better on usability testing, even when standard usability titles are used (Yakel, 2002). Through these tests, which are explained in more detail below, the study will try to distinguish between the success rates of novice and experienced researchers with finding aids using either standard archival element titles or definitional phrasing.

Archives and archival materials are difficult enough to use already. Benjamin Ives Gilman, the Secretary of the Boston Museum of Fine Arts at the turn of the twentieth century, once stated that “It is nonsense to acquiesce in opening our doors on Sunday and at the same time to do nothing to help the Sunday visitor.” Just as art museums have made tremendous changes over the past century to better appeal to the general public,
archives must be willing to change if they are going to stay relevant to the modern user. Archives can no longer cater to the expert historian, but must rather be prepared for a huge range of users who have neither the time nor the motivation to learn archival terminology and practices. These alterations to element titles are one small way that this could be accomplished.

The intention of the study is to improve the navigability and, through it, usability of archival finding aids, particularly for novice users. It is expected that the results will show that novice users have a greater success navigating finding aids using definitional phrasing than those using standard element titles. It is also expected that experienced users will have a marginal improvement navigating finding aids using definitional phrasing over those using element titles. Experienced users may not see an improvement if they are used to the terminology used in standard element titles, but it is expected that the definitional phrasing will still be clearer and easier to use for navigating finding aids.
Methods

This study is making several assumptions about how terminology used in the hypothesis is being defined. The phrase “web-based archival finding aids” is referring to a specific kind of finding aid. In practice, finding aids are any kind of representation of or discovery tool for archival materials. For the purposes of this study, finding aid refers to finding aids produced for archival collections which are made freely available on the web and are created using DACS (Describing Archives, a Content Standard) and Encoded Archival Description (EAD). Archival element titles, the aspect of the finding aid on which this study seeks to improve, refer in practice to words or phrases that name the unit of description. For the purposes of this study, element title will refer to the titles recommended for use by DACS. Definitional phrasing, for the purposes of this study, will refer to series of words up to twelve in length which define the original title using shortened definitions derived from DACS.

Usability is difficult to study because there are such a large number of components associated with it. Therefore, this study attempts to look at usability through one of its components- navigability. Different scholars assign different components to usability, and navigability is not always identified as one of the primary ones. Studies of web site design, however, do tend to identify navigability as an important aspect (Tarafdar & Zhang, 2005; Hassan & Li, 2005), something which is supported in the archives domain by Elizabeth Yakel’s work (2008). For the purposes of this study, navigability will be defined according to how well participants are able to perform the
tasks of the test— in other words better navigability will be indicated by more correct answers, worse navigability by fewer.

The participants of the study will be divided between novice and experienced users. Previous studies of archives and usability have used focus groups or interviews where the participant indicated how familiar they were with archives or where all participants were identified as novices. For example, Johnson (2006) studied novice users of archives by looking at how undergraduate students interact with archives and archival materials. This study, however, intends to look at both novices and experienced users. Obviously, experience is linear rather than binary, but for the purposes of the study participants will be defined as one or the other. Novice users will be identified as those that have two or fewer experiences using archives within the past five years. Experienced users will be identified as those who have three or more experiences using archives within the past five years.

Usability testing is very effective to determine whether or not changes improve operation of a particular system, in this case, archival finding aids. The best usability tests have real users as participants and have them perform real tasks, which are observed and analyzed in order to identify and improve upon problems (Wrubel, 2007). This study will use protocol very similar to that used by Elizabeth Yakel in her 2008 study, with some minor alterations. While her study examined a broad range of problems, this study will focus specifically on navigating the structure of the finding aid through the terminology used in the element, or section, titles. Since the study will be comparing finding aids using standard element titles and finding aids using definitional phrasing, participants
will be asked to complete two tests within the time frame, one for each type of archival finding aid.

Study participants will go through a three-part protocol, which will consist of: (1) a survey to determine demographic information and experience using archives, (2) a usability test protocol where the subjects will be asked to perform between four tasks for each of the two versions of the test using archival finding aids, and (3) a debriefing interview where participants will be asked for comments or suggestions concerning the tasks they just performed and the finding aids themselves. The first part of the study will produce survey forms for analysis, while the second will result in transaction logs and videotapes of the sessions capturing screen movements and think-aloud verbalizations from the participants. The final portion, which is recommended by Jakob Nielsen (1993), will produce transcripts which will be used to help clarify participants’ goals, thought processes, and assumptions. This will aid interpretation of the results, providing some of the “why” behind the “what” revealed in the tests.

Think-aloud protocol is frequently used with formative evaluations such as this one, since it allows the tester to identify detailed areas of the interface and determine which ones cause the most problems (Nielsen, 1993). It also, like the post-test interview, helps to provide some of the context and “why” for the results produced in the usability test. Using real users and real tasks will help to ensure the validity of the test results. One of the greatest issues with usability studies in archives is finding motivated participants. Therefore, this study will recruit participants who have previously used archives or who come from fields where they will be expected to use archives, for example,
undergraduate history students. Using real tasks in the test will help ensure that the results can be applied to real situations.

There are several practical considerations to be addressed with this methodology. Ideally, the study should use between six and eight participants, half who are identified as novices and half who are identified as experienced users. Nielsen (1993) indicates that as few as three test participants can be used with good result in think-aloud studies, since they can quickly pinpoint misconceptions. Since this is also a comparative study, the number of minimum participants is intended to be doubled for comparative purposes.

The test sessions themselves, consisting of the pre-test survey, the usability test, and the post-test interview, are expected to take up to one hour together. The tasks will be designed so that there is a single, pre-determined correct answer. In order to control for individual variability in the two tests a within-subject design will be used, where all study participants complete both tests. In order to control for transfer of skill between the two tests, half the users will be given the test with definitional phrasing first and standard element titles second, while the other half will be given the tests in a reversed order.

The tasks themselves will be relatively short, asking users to locate relevant sections for particular kinds of information. Although this assumes that users navigate finding aids according to the titles of different sections rather than the content, studies indicate that this is a real method employed by users when using finding aids (Yakel, 2008). Struggling users will be allowed to be given a couple of gentle hints by the experimenter to get on with the test. If a user is clearly distressed, the test will be terminated and a new participant found, in order to ensure that the study will cause as
little emotional distress as possible. That said, the test should not provide any distress or discomfort for participants.

This kind of testing methodology relies on qualitative analysis more than quantitative. Since a very small number of participants will be used there will not be enough information for most statistical analyses, particularly significance. Some quantitative data will be produced for comparative purposes. The means and standard deviations of two factors will be examined for both versions of the test. The first factor is the number of correct answers for each test. The second factor is the time it takes to complete each task. This will allow for analysis of the number of observed, vocalized, and both observed and vocalized problems that participants have during each task and for both systems. Once these are coded, they can be examined to see which tasks had the most problems and what the nature of these problems were. Constant comparative analysis, where observations are identified and compared, will help indicate the kinds of problems that users have with the systems. This will help explain why a particular version- standard element titles or definitional phrases- was more navigable.
Results

As it turned out, only five of the six to eight participants expected were able to be recruited during the time frame allotted to this study. Four of these were identified as novices, meaning that they indicated that they had visited an archive two times or fewer in the past five years. The other participant indicated that they had visited an archive more than three times in the past five years, and were thus identified as an expert. As a result, comparisons made between the two user groups will very weak. It should be noted, however, that two of the novices indicated that they had visited an archive at least once in the past five years for class assignments, while the other two gave no indication of ever visiting an archive in the past five years.

Three participants were between the ages of eighteen and twenty-five, one was between the ages of twenty-six and forty, and one was over forty. Two participants indicated that they were currently enrolled at the University of North Carolina at Chapel Hill and three indicated that they were not. Whether they are currently enrolled at another institution or recently graduated was not ascertained. The expert user indicated that their experience in archives was for research purposes. See Appendix I for the content of the pre-test survey.

The usability test itself asked participants to complete four tasks for each version of the finding aid. The content of the finding aids were identical except for the titles of each section, which were either the standard element titles or definitional phrases. All
element titles were changed to conform to one of these. The tasks specifically requested the participants to identify the *Custodial History* element (DACS 5.1), the *Biographical History* element (DACS 10), the *Extent* element (DACS 2.5), and the *Scope and Content* element (DACS 3.1). The tasks were presented in the same order in both parts of the usability test. See Appendix II for the content of the usability test.

Although participants were given an hour in which to complete the full test, including survey, usability test, and interview, all participants required only half an hour or less. The shortest time for completion was fifteen minutes, which was the expert participant. The pre-test survey and the post-test interview were completed by all participants in five minutes or less. The usability test took participants between twelve and twenty-five minutes to complete. Completion times for individual tasks ranged between one minute and five minutes, but averaged about two minutes. The two tasks asking participants to identify the *Biographical History* element typically took the longest time to complete, while the two tasks asking users to identify the *Scope and Content* element typically took the least amount of time, although this may have been because it was the final question in both parts.

Novice participants and expert participants both identified the correct sections of the finding aid for only 50% of them in both finding aids (see Table 1). Performance of novice participants varied a great deal more in each individual task (see Table 2 and Table 3). The *Scope and Content* element was the most frequently identified correctly in both versions of the finding aid, at 100% in the finding aid with standard element titles and also in the finding aid with definitional phrases. The expert user did not correctly identify the scope and content element in either version.
Tables 1-3.

<table>
<thead>
<tr>
<th>Task</th>
<th>Novices- Percent Correct</th>
<th>Experts- Percent Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custodial History</td>
<td>75%</td>
<td>100%</td>
</tr>
<tr>
<td>Biographical History</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Extent</td>
<td>25%</td>
<td>100%</td>
</tr>
<tr>
<td>Scope and Content</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 2: Percent of correct responses per task using finding aid with standard element titles.

<table>
<thead>
<tr>
<th>Task</th>
<th>Novices- Percent Correct</th>
<th>Experts- Percent Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custodial History</td>
<td>50%</td>
<td>100%</td>
</tr>
<tr>
<td>Biographical History</td>
<td>25%</td>
<td>0%</td>
</tr>
<tr>
<td>Extent</td>
<td>25%</td>
<td>100%</td>
</tr>
<tr>
<td>Scope and Content</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 3: Percent of correct responses per task using finding aid with definitional phrases.
Novice users correctly identified the section for the *Custodial History* element more frequently in the finding aid using standard element titles (75%) than the finding aid using definitional phrases (50%). The *Custodial History* element was the second most correctly identified section in both versions. The expert participant correctly identified the *Custodial History* element in both versions. The *Extent* element was correctly identified 25% of the time by novice participants for both versions of the finding aid. The expert participant also correctly identified this section in both versions.

Novice participants correctly identified the *Biographical History* element with the least frequency in both versions of the finding aid. This section was correctly identified only 25% of the time in the finding aid using definitional phrases and 0% in the finding aid using standard element titles. The expert participant did not correctly identify the *Biographical History* element in either version of the finding aid. In the end, novice users performed better on the finding aid using standard titles for the *Custodial History* element only. They performed better on the finding aid using definitional phrases for the *Biographical History* element only. They performed equally well with either finding aid on both the *Scope and Content* and *Extent* elements.

On several tasks novice participants identified more than one section. Two of the four novice participants did this. When this occurred, if one of their responses was correct it was considered a fully correct response. One novice participant did not provide a response at all to one of the tasks, which was counted as an incorrect response. The greatest number of responses to a single task was three. All tasks pertaining to the finding aid using standard element titles received only one response from novice participants.
Novice participants’ responses to tasks for the finding aid using definitional phrases ranged between 0.75 and 1.5 responses (see Table 4.)

<table>
<thead>
<tr>
<th></th>
<th>N1</th>
<th>N2</th>
<th>N3</th>
<th>N4</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custodial History</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0.75</td>
</tr>
<tr>
<td>Biographical History</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1.25</td>
</tr>
<tr>
<td>Extent</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td>Scope and Content</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Table 4: Number of novice responses to tasks for the definitional phrasing finding aid.

When providing an incorrect response or providing more than one response, both novice and expert participants put down similar and closely related responses. The expert participant indicated the Abstract element for both Scope and Content element tasks. The Abstract is typically developed in part from the Scope and Content element. The expert participant also indicated the Creator element both times in for the Biographical History task. The Biographical History and Creator elements both identify the individual or organization responsible for the creation, assembly, and/or maintenance of the materials, but the Biographical History element provides more information, which the task wanted.

Novice participants identified fairly similar alternatives for most tasks. The Custodial History element tasks for both finding aids was, was incorrectly identified as Scope and Content by one novice participant. The Biographical History element was incorrectly identified the most frequently as the Citation Note, Scope and Content, Custodial History, and Creator elements. Responses were more varied for the finding aid using definitional phrases. The Extent element was incorrectly identified as the Scope and
Content element or the actual contents list of the finding aid. The Scope and Content element was incorrectly identified as the Abstract and Conditions Governing Reproduction and Use element by the same novice participant, who also correctly identified the section.

The post-test interview asked participants to comment on the tasks they had performed and to provide suggestions for improvements. See Appendix III for the questions asked during the post-test interview. Most participants made comments comparing the two finding aids. The expert participant indicated that the finding aid using standard element titles was easier to use, but also stated that this may have been because it was the second finding aid that they examined for the usability test and they had gotten used to the tasks. One novice participant also indicated that they preferred the finding aid using standard element titles, since it was a little clearer to them. One novice participant indicated a preference for the finding aid using definitional phrases, saying that it “was easier to locate details.” The other two participants did not indicate a preference for either finding aid.

Only one participant indicated that they found any of the tasks particularly difficult, stating that “the only one I really had trouble with was part two, number six [standard element titles finding aid, Biographical History element task], but none of them struck me as particularly difficult, at least I feel I got acceptable answers for them. The novice participants did not indicate that any of the tasks seemed particularly easy either. The expert participant stated that tasks where they identified the Abstract element were the easiest. Presumably, the participant was referring to tasks asking the participant to identify the Scope and Content element. Although the expert participant’s responses was
technically incorrect, they response they gave was closely related to the one sought.

Other comments included statements that the finding aids were “boring,” that some of the questions were somewhat long, and that the tasks would have been easier if the finding aids had a more “standard format” like a journal citation.

Results do not indicate a clear preference for one version of the finding aid over another. Therefore, the study’s hypothesis is rejected as false. That said, the study did provide many interesting participant reactions to the tasks and the finding aids, which can be used to provide a better understanding of how users interact with and navigate archival finding aids.
Discussion

Although the percentage of correct responses varied a great deal across tasks, participants tended to express uncertainty throughout the usability test, even when they were selecting correct responses. All five participants used phrases indicating uncertainty during the think-aloud protocol, particularly “seems like” and “I guess.” These and other phrases suggested that the participants were making guess about best fit answers and settling for ones that seemed to them to be close to right rather than definitely right.

Others made full statements during the course of the test to indicate their uncertainty over specific tasks. One novice participant, when answering the Scope and Content element task for the standard version of the finding aid stated “Aww, I’m answering them all wrong [laughs].” Another novice, when answering the Biographical History element task for the modified finding aid, stated “This is difficult! I feel like my answer is not going to be the appropriate answer, which bugs me.” Interestingly, both participants identified the correct element for these tasks, though the former supplied more than one answer.

Only two of the participants clearly expressed confidence during the course of their usability tests. The expert participant, who also finished the usability test in the least amount of time, definitively stated most of their answers in a rapid fashion. In contrast, all of the novice participants expressed hesitation and extra consideration for at least one of their responses. One novice participant also expressed confidence during their test,
though they also expressed uncertainty at other times. This participant prefaced several vocalizations of their answers with the word “bam!”

For the most part, participants did not seem to notice the differences between the two versions of the finding aids. One novice participant commented that they seemed the same, but most participants either made no statement regarding them or made statements suggesting that they did not recognize that the content of the finding aids was identical and only the element titles were changed. Only one participant expressed a preference during the course of the test. This novice stated, upon beginning the tasks relating to the modified finding aid, that the finding aid “seemed much clearer” in contrast to the finding aid with standard element titles, though the novice participant did not state why it seemed clearer. The expert participant was the only participant to make reference to the different element titles themselves. When answering the task relating to the Extent element for the standard finding aid, the participant stated “I never would have connected the word extent to quantity.”

The overall level of uncertainty throughout the test suggests that, even when finding relevant sections, novice users are generally uncomfortable navigating finding aids, regardless of the style of the element titles being used. Unlike the expert participant, who expressed confidence throughout both parts of the usability test, all four novice participants expressed uncertainty over several of their responses to tasks during both parts. The participants did not appear to be distressed or overly frustrated by this—some furrowed their eyebrows, but their body language tended to be fairly impassive throughout— but nor were they particularly comfortable with navigating the finding aids. Although the definitional phrases may have helped users disambiguate particularly
difficult tasks, specifically the *Biographical History* element tasks, overall performance did not differ between the two versions of the finding aid with either group of participants.

One of the reasons that participants did not perform better with one finding aid over another may be due to differences in searching styles. One novice participant began the usability test not by looking at the tasks, as the other participants did, but by quickly reading over the finding aid. The novice participant then drew preliminary conclusions about the arrangement and organization of the finding aid, which they then reflected on when answering the individual tasks. The expert participant completed the tasks by rephrasing them and rephrasing what they read in the finding aid. The emphasis here appeared to be on the content of the finding aids rather than the element titles themselves.

Several of the novice participants also used search strategies that suggested that the content of the finding aids rather than the element titles guided their search and navigation. One novice participant conducted their search by skimming titles and then checking their contents to clarify their meaning and confirm whether or not they considered the section to be the correct response to the question. At one point they stated that they “just haven’t seen anything in the headings, so I’m reading more the content within them that matches it more closely.” The same participant was also the only one to use CTRL+F to conduct a keyword search. Other novice participants also read aloud the element titles and their content to confirm their selections.

Whether these participants use similar search strategies for other types of representative records, like bibliographic records libraries or store catalogs, is uncertain. However, it may be that the participants relied on the content of the finding aids to
confirm their selections and to clarify the element titles because of the unfamiliar nature of the finding aids. In the few cases where participants expressed clear confidence in their answers to individual tasks, they only stated the element titles without referring to their content. This was true both for the expert participant, who selected an incorrect but closely related element for the Scope and Content element task in both versions of the finding aid, and the novice participant, who used the phrase “bam!” for the Custodial History element task in the finding aid with standard element titles. This suggests that users are more likely to rely on element titles alone only when their level of confidence is higher. When uncertain or uncomfortable navigating the finding aid users may rely more heavily on the content of the finding aid to clarify their searches and less on the, admittedly oftentimes ambiguous, element titles.

The greatest source of ambiguity, confusion, and uncertainty for novice participants appeared to be tasks that referred to concepts common in archival practice but less so in other environments. Three of the four novice participants made comments suggesting that they were uncomfortable or unsure of themselves with tasks where archival practice tends to creates ambiguity. For example, several novice participants expressed uncertainty over which section to choose because more than one seemed to have relevant information. Sometimes participants mentioned elements that were only vaguely related, like the Conditions Governing Reproduction and Use element and the Scope and Content element. At other times the sections mentioned by the novice participant were closely related or directly developed from one another, like the Abstract element and the Scope and Content element.
One novice even specifically commented on three sections, which reflect the hierarchical nature of archival finding aids. This is an issue that is not present in bibliographic records and is, therefore, unfamiliar to most users. When trying to answer the task for the Biographical History element in the finding aid using definitional phrases, the novice participant stated:

“There is the current location, the reading room where they’re protected, but the creator would still be the family, and they were the ones that preserved it all this time, its only recently that [institution] protects them… I guess a few sections really do that.”

And again with the task for the Scope and Content element in the same version of the finding aid:

“The abstract gives you the overview…and then also the [Scope and Content element] also describes this. It gives you an overview, but then again the contents list break it down very specifically into what the contents are. I’m going to go with [Scope and Content element] because it’s the most succinct summary of that.”

The participant was beginning to naturally develop better knowledge of the hierarchical nature of the finding aid, though here it impeded their ability to confidently answer the tasks.

Another novice participant commented on both the varying degrees of specificity in different sections of the finding aid under different elements and also expressed confusion over the relationship between the creator and the collection. They stated that it was “more confusing because it is about the family, but it was also created by the family.” These statements indicate that the novice participants, and perhaps users more generally, are uncomfortable or unfamiliar with common archival principles, like the relationships between creators, donors, and institutions or the hierarchical nature of finding aids. These are concepts that are fairly intrinsic in archives, but fairly uncommon
in other institutions, like libraries. If a user’s only previous research experience is with
the web, where materials are readily delivered by highly nuanced search engines, or
libraries, where bibliographic records more clearly distinguish between specific types of
metadata and records, then archival finding aids are likely to make the user very
uncomfortable. This discomfort reduces the user’s confidence navigating finding aids,
forcing them to rely on both the content and text of the finding aid and the element titles.
Conclusion

This study sought to determine whether or not the use of definitional phrases in place of standard element titles in archival finding aids would improve navigability among novice users. This is in response to growing concern over usability issues in archival settings, particularly regarding user interactions with finding aids. Many previous studies have indicated that users have a lot of trouble understanding the terminology used in finding aids, which suggested that altering some of these phrases would improve navigability. This was tested through a usability test with think-aloud protocol.

In the end, the hypothesis was rejected- the use of definitional phrasing in place of standard element titles appeared to have no clear effect on novice user navigability of finding aids. While it may have helped disambiguate one of the more confusing elements, overall performance was the same between the two versions of the finding aid. This suggests that the vocabulary used in finding aids, although a contributing factor, is not the primary driver of user confusion and uncertainty when using archival finding aids. This may be exacerbated by the special nature of archives and finding aids, particularly the way that the latter often express archival concepts which are, at best, poorly understood by novice users of archives.

There is a lot yet to learn about how users navigate finding aids and how finding aids can be improved to better support their needs. Further work still should be done to better understand how well users understand the terminology used by archivists in finding
aids. One of the first steps could be to conduct a revised version of this study, one with more tasks and more participants, particularly experts. This will help to differentiate skill levels and allow for meaningful comparison between the two participant groups and may result in different findings than this study. It may also be useful at some point to conduct a study similar to the one conducted by Chaudhry and Choo in 2001 in libraries, where they sent out surveys asking users to define various library “jargon.” Further work should also be done to better understand how different groups navigate finding aids in order to develop practices to better cater to their needs. Finding aids are usually written with practiced historians in mind, and the search needs of novice users in archives are still poorly understood.
Bibliography


Appendix I- Pre-test Survey

Please indicate your answer using the bold tool.

1. What is your gender?
   - M
   - F
   - Choose not to answer

2. How old are you?
   - 18-25
   - 26-40
   - 40+
   - Choose not to answer

3. Are you currently enrolled in the University of North Carolina at Chapel Hill?
   - Yes
   - No
   - Choose not to answer

4. How many times have you used an archive in the past five years?
   - 0-2 times
   - 3 or more times
   - Choose not to answer

5. If you have used an archive in the past, why did you use it?
   - For a class
   - For research
   - For personal or other reasons
   - Choose not to answer
Appendix II- Usability Test

Please note: During both sections of the test you will be asked to think aloud. This is a common testing protocol. As you complete the tasks below, please say aloud whatever you are looking at, thinking, doing, and feeling as you go about them. If you have any questions or would like clarification, feel free to ask at any time. Please note that section titles are in bold in the finding aid.

Part I

Instructions: Open the PDF file labeled Finding Aid 1 on the desktop. Then, complete the following tasks. Spaces have been provided for you to type your answers.

1. Locate and identify the title of the section that provides information on changes of ownership of the material being described.
   Answer: [Custodial History Element]

2. Locate and identify the title of the section that provides information about the organization or individual associated in some way with the creation, assembly, accumulation, and/or maintenance and use of the materials being described.
   Answer: [Biographical/Historical Note Element]

3. Locate and identify the title of the section that provides information on the amount of the materials being described.
   Answer: [Extent Element]
4. Locate and identify the title of the section that provides information on the nature of
the materials and the activities reflected in them.

Answer: [Scope and Content Element]

**Part II**

Instructions: Open the PDF file labeled Finding Aid 2 on the desktop. Then, complete the
following tasks. Spaces have been provided for you to type your answers.

5. Locate and identify the title of the section that provides information on changes of
ownership of the material being described.

Answer: [Custodial History Element]

6. Locate and identify the title of the section that provides information about the
organization or individual associated in some way with the creation, assembly,
accumulation, and/or maintenance and use of the materials being described.

Answer: [Biographical/Historical Note Element]

7. Locate and identify the title of the section that provides information on the amount of
the materials being described.

Answer: [Extent Element]

8. Locate and identify the title of the section that provides information on the nature of
the materials and the activities reflected in them.

Answer: [Scope and Content Element]
Appendix III- Post-Test Interview

1. Please comment on the tasks you performed during the test. Did you find any particularly easy?

2. Were any particularly difficult?

3. Do you have suggestions for how the tasks could have been made easier?

4. Do you have any other comments?