Great Expectations: Researching Usability of Online Museum Collections

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Abstract

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This evaluative study examined what museum visitors expect to find when they access a museum's online collection, how they are using online collections, and how successful their searches are. Increased reliance on the Internet in today's culture means the museum website is quickly becoming the face for the institution and, for some visitors, their first impression. If a museum's online collection is not useful or usable, then time spent making data available online will be wasted. This study focused on stakeholders of The Henry Art Gallery, located in Seattle, Washington, and provided a model comprised of Usability Testing and Follow-Up Interviews to create a comprehensive view of the user experience as it relates to online collections access. The findings of this evaluation revealed trends in usability and user experience. For example, users voiced the ability to share collections objects via social media and data suggested a desire for relationship-based search functionality.

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Chapter 1
Introduction

Background Information

The Henry Art Gallery (Henry) is the contemporary art museum at the University of Washington (UW). Opened in 1926, the museum is the first public art museum in the state of WA. The Henry has a collection of over 25,000 objects and is committed to championing internationally recognized and emerging artists. In 2007, the Henry underwent a massive overhaul to their Collections Management System (CMS). Prior to this shift, the CMS used, SNAP! was solely accessible by the Collections staff, and objects were not available for viewing online. The Collections staff pushed for a system upgrade, citing difficulties utilizing it and a strong need for an updated system that would also enable the future transfer of object images to the online arena. Upon receiving grant funding, Henry staff enlisted the help of a project manager to assist in a working timeline for the implementation of the data transfer from the old CMS to the newly acquired Multi Mimsy XG (Mimsy). The software developers who create Mimsy also offer a platform called Mobius, which allows the transfer of objects and associated data in the collection to the web[1].

During the first implementation of Mobius, it was only accessible to staff via authorized login credentials. The goal, however, was to publish the objects in the collection to the web with 100% of permanent collections photographed and accessible from that web portal. The collection became accessible to the public during the launch of the new Henry website in 2008, designed by

[1] Weible, Erin. "No Longer an Island: A New Collections Management System Transforms the Henry Art Gallery" (Seattle, WA: The Henry Art Gallery, 2008).

a local firm IF/THEN. IF/THEN also created a new "face" for Mobius, as it was considered by museum staff to be unattractive and did not fit in with the look of the website[2].

The museum is currently undergoing the process of a website redesign that will impact the collections access. The Henry has been presented with the unique opportunity to make changes to the look and usability of the collection site. Information on current usability of the collections access as well as overall user experience with the current iteration of the collections sites is needed prior to making any changes or implementing new features.

Purpose of Evaluation Study

The purpose of this study was to evaluate what museum visitors expect to experience when accessing online collections. In order to answer this question, three specific questions were developed to guide the study:

1. What do museum visitors expect to find when they access an online collection?
2. How are they using the online collections?
3. How successful are their searches?

[2] Faust, Rachael, interview by Carly Wickell. *Interview* (June 6, 2013).

Chapter 2
Literature Review

"Digital technologies have the potential to rewrite the meaning and significance of collections."
– Fiona Cameron[3]

This literature review examined two general areas of interest relating to evaluations of museum online collections. The first section of the literature review described published research from the field on online collections access. This section synthesized the main findings that museums seem to be taking a closer look at their web presence, inclusive of online collections, and that further research should be completed to determine what users expect from online access. The second section looked at usability testing research, and its place in evaluative studies of online museum collections.

Published Research from the Field

The J. Paul Getty Foundation asked nine institutions to participate in a study aimed at moving museum collections online. Institutions involved consisted of: Art Institute of Chicago, Freer Gallery of Art and Arthur M. Sackler Gallery, J. Paul Getty Museum, Los Angeles County Museum of Art, National Gallery of Art in Washington, D.C., San Francisco Museum of Art, Seattle Art Museum, Tate: London, and the Walker Art Center. The published reports by the Getty Foundation that followed the initiative, titled *Moving Museum Collections Online: An Interim Report from the Getty Foundation* and *L.A. Art Online: Learning from the Getty's Electronic Cataloguing Initiative*, offer data from each institution that represents a culmination of a "six-year initiative … launched in 1997, at a time when museums were just beginning to

[3] Cameron, Fiona. "Digital Futures I: Museum Collections, Digital Technologies, and the Cultural Construction of Knowledge" (*Curator* 46, no. 3, July 2003), p327.

develop Web sites"[4] This research initiative addressed what offering access to collections through the website meant for the visitor and the museum[5].

In the Getty Foundation's report, *Moving Museum Collections Online: An interim report from the Getty Foundation,* the nine participating institutions gave feedback on their online collections process. A problem noted in the research was a common obstacle surrounding technology used for museum collections. Multiple databases are often used in museums to store information about its collections, and it can often take another form of software to make that information web-ready. "Moreover, these systems do not "talk" to one another, often necessitating yet another layer of technology – middleware – to integrate them for online publishing. Developing the middleware is more difficult than many institutions initially imagined."[6]

Results and Data from the Field

Dr. Paul F. Marty is the former Director of Information Technology at the Spurlock Museum, and currently an Associate Professor for the School of Information within the College of Communication and Information at Florida State University. In 2008, Marty conducted a visitor study "administered to more than 1200 visitors at nine different online museums that addressed questions about the role of museum websites in the lives of museum visitors. The results provide details about the use of digital museum resources on museum websites, and indicate that the majority of online museum visitors have clear expectations for the interactions that take place between museums and museum websites."[7] Marty's exploratory study received a large 69.4% response rate when asked, "From your perspective, how important is it for a museum to have a

[4] J. Paul Getty Foundation. "L.A. Art Online: Learning from the Getty's Electronic Cataloguing Initiative" (Los Angeles, CA: The Getty Foundation, 2007).
[5] Ibid.
[6] J. Paul Getty Foundation. "Museum Catalogues Online" (Los Angeles: J. Paul Getty Foundation, 2012).
[7] Marty, Paul F. "Digital Museum Resources and Their Use, Museum Management and Curatorship." (*Museum Websites and Museum Visitors* 23, no. 1, 2008), p81.

museum website?"[8] This coincides with a statement from the Getty Foundation's L.A. Art Online report, "a Web-savvy public expects immediate user-friendly access to visual arts collections."[9] The respondents of Marty's study also expressed a desire for activities and content on the website that was exclusive to that arena – to "take advantage of the online environment to present unique experiences that cannot be duplicated in museums".[10]

In his exploratory study, Marty went on to ask more questions on visitor views of online access, including how often they went to the museum's website. The answers to this query revealed that "14.9% (179) [visited a museum website] Quarterly, 28.4% (341) Monthly, 30.5% (366) Weekly, and 9.2% (110) Daily." These results show an increase by 4% in the daily visit category than when Dr.'s Victoria Kravchyna and Sam Hastings completed their survey in 2002.

Dr. Victoria Kravchyna conducted this study during her term at Arius3D, Inc., where she focused on the research and evaluation of 3D technologies and the digitization of cultural heritage objects. Dr. Sam Hastings collaborated on this study, and is the Director and Professor of the School of Library and Information Sciences at the University of South Carolina. Kravchyna and Hastings focused on a more specific demographic than Marty, with much of their research revolving around museum professionals and academics.[11] The questions that framed their study were "what kind of information are Web users looking for? What quality and quantity of images would they like to see on a page? What are their purposes for using images from the museum's collections? [and] is the information adequate?"[12] Through their research, they were able to conclude that: "virtual visitors (63%) particularly value a capability to browse collection databases, to locate

[8] Marty, Paul F. "Digital Museum Resources and Their Use, Museum Management and Curatorship," p88.
[9] J. Paul Getty Foundation. "L.A. Art Online: Learning from the Getty's Electronic Cataloguing Initiative."
[10] Marty, Paul F. "Digital Museum Resources and Their Use, Museum Management and Curatorship," p90.
[11] Kravchyna, Victoria, and Sam Hastings. "Informational Value of Museum Web Sites." (*First Monday* 7, no. 2, February 2002).
[12] Ibid.

supplementary descriptive information. There is a need for contextual information, vivid descriptive narratives, and theory drawn from narratives."[13] Kravchyna and Hastings state in their research, "one definition of a "good" museum Web site is one that combines well-produced general interest information with full access to the whole collection. This survey found that 63% percent of virtual visitors look forward to searching museum collections."[14] Their study concluded, "Virtual visitors (63%) particularly value a capability to browse collection databases, to locate supplementary descriptive information. There is a need for contextual information, vivid descriptive narratives, and theory drawn from narratives."[15]

Dr. Fiona Cameron is, at publication, a Senior Research Fellow for the Institute of Culture and Society at the University of Western: Sydney. Cameron is widely published and one area of research focus is on digital technologies as they relate to cultural heritage. Her 2003 article, *Digital Futures I: Museum Collections, Digital Technologies, and the Cultural Construction of Knowledge,* "considers the synergy between theoretical ideas in the academy and the computer ontologies that have been brought to bear on collections information."[16] Her research emphasized relinquishing some control of content interpretation to the user, rather than having a fully curated online experience. She also identified several emerging trends, including the fact that "user group profiles expressed a desire to engage with collections information as dispersed narratives" while still needing a balance of information from the museum. Cameron stressed this balance was important to keeping the museum as an authoritative, trustworthy source.[17]

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[13] Kravchyna, Victoria, and Sam Hastings. "Informational Value of Museum Web Sites."
[14] Ibid.
[15] Ibid.
[16] Cameron, Fiona. "Digital Futures I: Museum Collections, Digital Technologies, and the Cultural Construction of Knowledge" (*Curator* 46, no. 3, July 2003), p325.
[17] Ibid, p336.

Nate Solas is, at publication, the Board Director for the Museum Computer Network and former Senior New Media Developer and Head Technologist for the Walker Art Center. Solas' 2010 publication, *Hiding Our Collections in Plain Site: Interface Strategies for Findability*, draws similar conclusions to Cameron's research. Solas found that users looking to access online collections are seeking a type of free-form learning experience, where they can discover on their own and at their own pace with the sense that the information gained was correct/true since it was coming from a museum website.[18] Visitors also want museum websites to offer some type of customization – meaning that visitors with varying degrees of online proficiency would be able to find information easily.[19]

A statement from Irene Hirano, President and Chief Executive Officer of the Japanese American National Museum in Los Angeles, in the Getty Foundations report, *L.A. Art Online*, acknowledges the difficulties of moving collections online, especially for museums of varying sizes. Hirano goes on to suggest it is the duty of the museum to find a way to provide access to its visitors in order to "remain more relevant and beneficial to the public we serve."[20] Michael Govan, Chief Executive Officer and Wallis Annenberg Director of the Los Angeles County Museum of Art (LACMA) is also quoted in *L.A. Art Online*, stating: "Our mission is all about collections access and preservation—and in today's world, online collections information is central to both. LACMA's Collections Online program is vital to so much that we do— from scholarship and exhibitions to education and development. It's central to our mission, and a priority for our museum."[21]

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[18] Solas, Nate. "Hiding Our Collections in Plain Site: Interface Strategies for "Findability"" (*Museums and the Web 2010: Preceedings*: Archives & Museum Informatices, March 2010).
[19] Ibid.
[20] J. Paul Getty Foundation. "L.A. Art Online: Learning from the Getty's Electronic Cataloguing Initiative."
[21] J. Paul Getty Foundation. "L.A. Art Online: Learning from the Getty's Electronic Cataloguing Initiative."

Anne Gilliland-Swetland, Professor and Director of the Center for Information at the University of California Los Angeles, and Layna White, Head of Collections Information and Access at San Francisco Museum of Modern Art, collaborated on the study, *Museum Information Professionals As Providers And Users Of Online Resources*. Gilliland-Swetland and White found that many websites are written to appease the academic and research audience rather than the average user. They state that "descriptions of museum objects… may be written for curators and scholars, and the words preferred by experts might not jibe with words used and understood by others seeking information and images. There may be a disconnect between what information professionals do as content providers and what many other people know or are familiar with.[22]

Jeff Doyle, Director of Communications at the Open Museum and lead designer and developer of that museum's website, and Maureen Ward Doyle, Director of Heritance, a not-for-profit that offers free services for training, consulting, and websites, collaborated on the article, *Mixing Social Glue with Brick and Mortar: Experiments Using the Mobile Web to Connect People, Objects, and Museums*. This report stated that a museum should "capture visitors as friends and inspire them to champion the museum's content via their social networks." This notion illustrates another benefit for the museum to make its collections accessible to the average individual; that "the primary design goal of a content delivery system should be transparency: to get the users engaged with the content, not with the delivery process or the technology."[23]

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[22] Gilliland-Swetland, Anne and Layna White. "Museum Information Professionals as Providers and Users of Online Resources" (*ASIS&T Bulletin* 30, no. 5, June/July 2004).

[23] Doyle, Jeff, and Maureen Ward Doyle. "Mixing Social Glue with Brick and Mortar: Experiments Using the Mobile Web to Connect People, Objects, and Museums." (*Museums and the Web 2010.* Toronto: Archives & Museum Informatics, 2010).

Usability and Evaluation Research

One source that proved informative for this study was an article written in 2006 by Hong (Iris) Xie, PhD, Doctoral Program Director and Professor at University of Wisconsin-Milwaukee. In her study *Evaluation of digital libraries: Criteria and problems from users' perspectives*, Xie outlines a process to analyze digital libraries from a user standpoint. Her study's purpose was to expand on current evaluation methods of digital libraries. While this study is focused on digital libraries, common themes that correlate with online museum collections became apparent, such as the need for easy navigation, options for searching including basic and advanced, and having clear help features in place.[24] For instance, one of the participants in her study stated, "I think the most important criterion…is usability. Users need to be able to navigate…with a certain sense of ease, or else they may become frustrated and decide to go elsewhere."[25]

A similar view emerged among museums that participated in case studies for the Getty's Electronic Cataloguing Initiative. Their report, *L.A. Art Online: Learning from the Getty's Electronic Cataloguing Initiative*, revealed inside processes of the nine museums, located in the United States and Europe, that were in the process of moving their collections online. One participating organization acknowledged that their museum was so focused on the overall idea of the project that they forgot about user design, forcing them to put the project on hold for further evaluation.[26] The report goes on to give an example of possible user searches that can go wrong if the exact terminology in the catalogue is not used. "An online visitor searches for "painting" on a museum's web site, but comes up with no records although the museum has hundreds of

[24] Xie, Hong (Iris). "Evaluation of digital libraries: Criteria and problems from users' perspectives." (*Library & Information Science Research* 28, 2006), p443.
[25] Xie, Hong (Iris). "Evaluation of digital libraries: Criteria and problems from users' perspectives," p439.
[26] J. Paul Getty Foundation. "L.A. Art Online: Learning from the Getty's Electronic Cataloguing Initiative."

paintings. The museum failed to include the standard term *painting* in their cataloguing system."[27] This type of error correlates with Xie's previously mentioned need for clear and useful help features.

The report section, *"Why do it at all?"* explains that the main goals of the evaluation process were to: "1) Increase Access, 2) Expand Audiences, 3) Support Teaching and Learning, 4) Improve Documentation, 5) Preserve Collections, and 6) Streamline Workflow."[28] An example case study given in the report representative of an institution that used the project to streamline their workflow was the Southwest Museum. This institution was going through a site renovation that vastly decreased the amount of collection on view to "less than 2%."[29] The institution was able to streamline their object relocation process by implementing the ability to catalogue and do other reporting via online tools.[30]

Giannis Tsakonas, Deputy Director for the Library & Information Center at the University of Patras, in Greece, and Christos Papatheodorou, Associate Professor for the Department of Archives and Library Science at the Ionian University in Greece, collaborated on a study in 2008 titled *Exploring usefulness and usability in the evaluation of open access digital libraries,* touches on similar themes when addressing evaluation techniques. This report has a slightly different focus, aimed at evaluation of an e-print archive through the ideas of usefulness and usability. Their study outlines the differences between the two concepts, defining usefulness as "whether the digital libraries constitute valuable tools for the completion of users' tasks" and

[27] J. Paul Getty Foundation. "L.A. Art Online: Learning from the Getty's Electronic Cataloguing Initiative."
[28] Ibid.
[29] Ibid.
[30] Ibid.

whether the digital libraries support the needs of those using them.[31] These concepts were then aligned in a framework alongside another measurable used in their study, overall system performance. According to Tsakonas and Papatheodorou, "the results show that usefulness and usability are two related concepts that jointly affect user satisfaction."[32] This research supports the need to evaluate digital collections.

The United States Government runs a website, Usability.gov, which provides core documentation on usability testing and evaluative research methods. Guides and templates are available on this site for conducting usability studies.[33] Documents available include, but are not limited to: *Planning a Usability Test*, *Running a Usability Test*, *and Reporting a Usability Test*.

Preparation tools and needed elements for conducting usability testing appear in the article, *Planning a Usability Test*. For example, it defines and identifies key facets to include in a usability test plan that includes: scope, purpose, schedule and location, sessions, equipment, participants, scenarios, metrics, quantitative metrics, and roles of staff or involved team members.[34] This document also includes metrics to use in testing, examples of test metrics include: successful task completion, identification of critical and non-critical errors, error-free rate, time on task, subjective measures, and participant likes, dislikes and recommendations.[35]

The Usability.gov document, *Running a Usability Test,* outlined proper conduct and techniques that can be employed in a usability test. It offers definitions and examples of moderating

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[31] Papatheodorou, Christos, and Giannis Tsakonas. "Exploring usefulness and usability in the evaluation of open access digital libraries" (*Information Processing and Management* 44, 2008), p1237.
[32] Ibid., p1235.
[33] Usability.gov. *What & Why of Usability.* (*Usability.gov,* http://www.usability.gov/what-and-why/index.html, accessed February 2014).
[34] Usability.gov. "Planning a Usability Test." (*Usability.gov.* http://www.usability.gov/how-to-and-tools/methods/planning-usability-testing.html, accessed February 2014).
[35] Ibid.

techniques, including: concurrent think aloud, retrospective think aloud, concurrent probing, and retrospective probing. For example, for the concurrent think aloud section, the document states that it is used to "understand participants' thoughts as they occur and as they attempt to work through issues they encounter. [This method] elicits real-time feedback and emotional responses, [but] can interfere with usability metrics, such as accuracy and time on task."[36] This document also provided information related to pilot testing and best practices for a successful usability testing session, as identified through the previously listed elements combined with test metrics that should be employed. Important best practices within this document include, but were not limited to, staying neutral as a moderator and ensuring test participants understand that the test is on the website and not on them.[37]

The final core document from Usability.gov, Reporting Usability Test Results, was used to inform methodology and understanding of data collection and coding for usability testing. According to Usability.gov, data analysis for usability testing is split between two categories: quantitative and qualitative data. Quantitative data is information that can be used to "make calculations such as: success rates, task time, error rates, satisfaction questionnaire ratings."[38] Qualitative data is information that is "related to: observations about pathways participants took, problems experienced, comments/recommendations, [and] answers to open-ended questions."[39]

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[36] Usability.gov. "Running a Usability Test." (*Usability.gov,* http://www.usability.gov/how-to-and-tools/methods/running-usability-tests.html, accessed February 2014).
[37] Ibid.
[38] Usability.gov. "Reporting Usability Test Results." (*Usability.gov,* http://www.usability.gov/how-to-and-tools/methods/reporting-usability-test-results.html, accessed February 2014).
[39] Ibid.

It is recommended to "make sure your problem statements are exact and concise" and clarifies the difference between a good problem statement and a poor one.[40]

Implications of the Literature

Diana Folsom, Manager, Art and Education System in the Collections Management and Information department at LACMA, stated in the L.A. Art Online report, "Online users want more of everything. With technology you can have more.... How far should we go?" According to the literature, most museum professionals seem to recognize the need to create an online space for their collections. According to The Getty Foundation's research, those museums that put a focus on their online presence generally saw an increase not only in online traffic, but in visitation to the physical site as well. Museums seem to be taking a closer look at their web presence, inclusive of online collections, and it would appear further research should be completed to determine what users expect from online access.

[40] Usability.gov. "Reporting Usability Test Results."

Chapter 3
Methodology

Evaluation Study

The purpose of this evaluation study was to explore what museum visitors expect to experience when accessing online collections? In order to answer this question, three specific questions were developed to guide the study:

1. What do museum visitors expect to find when they access an online collection?
2. How are they using the online collections?
3. How successful are their searches?

Two methods were used in this evaluative study: usability testing and structured interviews.

Key Terminology

Definitions obtained from Usability.gov were used for the purpose of this study. According to Usability.gov, Usability refers to "How effectively, efficiently and satisfactorily a user can interact with a user interface."[41] Usability testing is defined as "include[ing] a range of test and evaluation methods such as automated evaluations, inspection evaluations, operational evaluations and human performance testing. In a typical performance test, users perform a variety of tasks with a prototype (or an operational system) while observers note what each user does and says and performance data are recorded. One of the main purposes of usability testing is to identify issues that keep users from meeting the usability goals of a Web site."[42] The usability study documented how visitors used the sites with commentary throughout the study explaining their motivation behind each action.

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[41] Usability.gov. *What & Why of Usability.*
[42] Ibid.

Structured interviews, as defined by Michael Quinn Patton, are those in which "the exact wording and sequence of questions are determined in advance. All interviewees are asked the same basic questions in the same order."[43] Structured interviews followed each usability test of the study to serve as a means to identify visitor expectations versus actual experience of the online collection sites.

Combining usability testing with follow-up structured interviews in this study at the Henry Art Gallery was designed to provide a broad understanding of the online visitor experience.

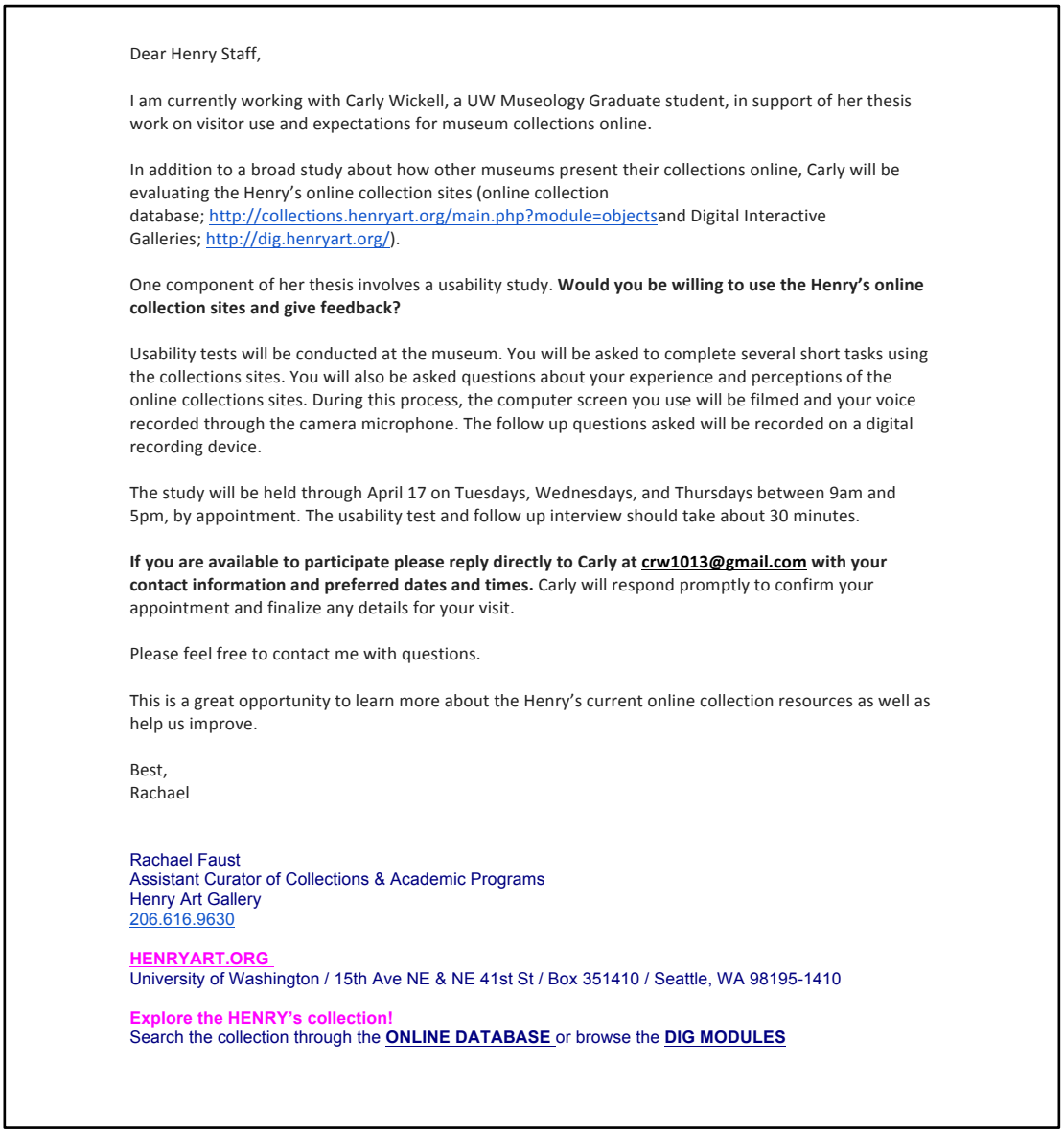
Participants

Twenty subjects were selected to participate in this study based on their invested interest in the Henry Art Gallery. The subjects were drawn from internal distribution lists that included researchers and academic staff of the University of Washington (UW), museum members, and staff of the Henry Art Gallery. This study did not advertise the call-to-participate to subjects under the age of 18. Subjects fitting one or more of these groups were called to participate via email. Email scripting templates from Usability.gov were used in the creation for the call-to-participate email, with changes made to personalize the content to the Henry. Two emails were drafted: one specific to UW researchers/academics and museum members, another directed toward museum staff. Refer to **Figures 1** and **2** below for the call-to-participate email templates.

A call-to-participate allowed subjects within the desired groups to volunteer for the study, and information about the nature of the study was given prior to consent. Twenty-three participants responded, and due to scheduling conflicts, timing, and availability, only 20 of those individuals

[43] Patton, Michael Quinn. *Qualitative Research and Evaluation Methods. (*Thousand Oaks, CA: Sage Publications, 2002) p349.

became participants. Of those, 11 were Henry staff, five were members of the Henry, and four were UW researchers/academics. Between the dates of March 26, 2014 and April 25, 2014, usability testing and structured follow-up interviews were performed on all 20 participants.



Dear Henry Staff,

I am currently working with Carly Wickell, a UW Museology Graduate student, in support of her thesis work on visitor use and expectations for museum collections online.

In addition to a broad study about how other museums present their collections online, Carly will be evaluating the Henry's online collection sites (online collection database; http://collections.henryart.org/main.php?module=objectsand Digital Interactive Galleries; http://dig.henryart.org/).

One component of her thesis involves a usability study. **Would you be willing to use the Henry's online collection sites and give feedback?**

Usability tests will be conducted at the museum. You will be asked to complete several short tasks using the collections sites. You will also be asked questions about your experience and perceptions of the online collections sites. During this process, the computer screen you use will be filmed and your voice recorded through the camera microphone. The follow up questions asked will be recorded on a digital recording device.

The study will be held through April 17 on Tuesdays, Wednesdays, and Thursdays between 9am and 5pm, by appointment. The usability test and follow up interview should take about 30 minutes.

If you are available to participate please reply directly to Carly at crw1013@gmail.com with your contact information and preferred dates and times. Carly will respond promptly to confirm your appointment and finalize any details for your visit.

Please feel free to contact me with questions.

This is a great opportunity to learn more about the Henry's current online collection resources as well as help us improve.

Best,
Rachael

Rachael Faust
Assistant Curator of Collections & Academic Programs
Henry Art Gallery
206.616.9630

HENRYART.ORG
University of Washington / 15th Ave NE & NE 41st St / Box 351410 / Seattle, WA 98195-1410

Explore the HENRY's collection!
Search the collection through the **ONLINE DATABASE** or browse the **DIG MODULES**

Figure 1. Henry Art Gallery staff call-to-participate email

Subject: Help the Henry improve our online collections

Thanks for using the Henry Art Gallery's online collection sites (online collection database; http://collections.henryart.org/main.php?module=objects and Digital Interactive Galleries; http://dig.henryart.org/) or viewing objects in the museum's Study Center over the past couple of years.

The Henry is dedicated to preserving the 25,000 objects in the permanent collection while also providing access to these objects to ensure collection objects are relevant and useful to the community. Thanks for putting our collection to use!

The Henry is currently working with Carly Wickell, a UW Museology Graduate student, in support of her thesis work on visitor use and expectations for museum online collections. Carly's thesis will not only help the Henry improve our online collections sites but will also contribute to the museum field. One component of her thesis involves a usability study. **Would you be willing to use the Henry's online collection sites and give feedback?**

For the usability test, you would need to come to the museum and complete several short tasks using the collections sites. You will be asked questions about your experience and perceptions of the online collections sites. During this process, the computer screen you use will be filmed and your voice recorded through the camera microphone. The follow up questions asked will be recorded on a digital recording device.

The study will be held March 18 – April 17 on Tuesdays, Wednesdays, and Thursdays between 9am and 5pm. The usability test and follow up interview should take about 30 minutes.

If you are available to participate please reply directly to Carly at crw1013@gmail.com with your contact information and preferred dates and times. Carly will respond promptly to confirm your appointment and finalize any details for your visit.

Please feel free to contact me with any questions.

Thanks for supporting the Henry and helping us improve!

Rachael

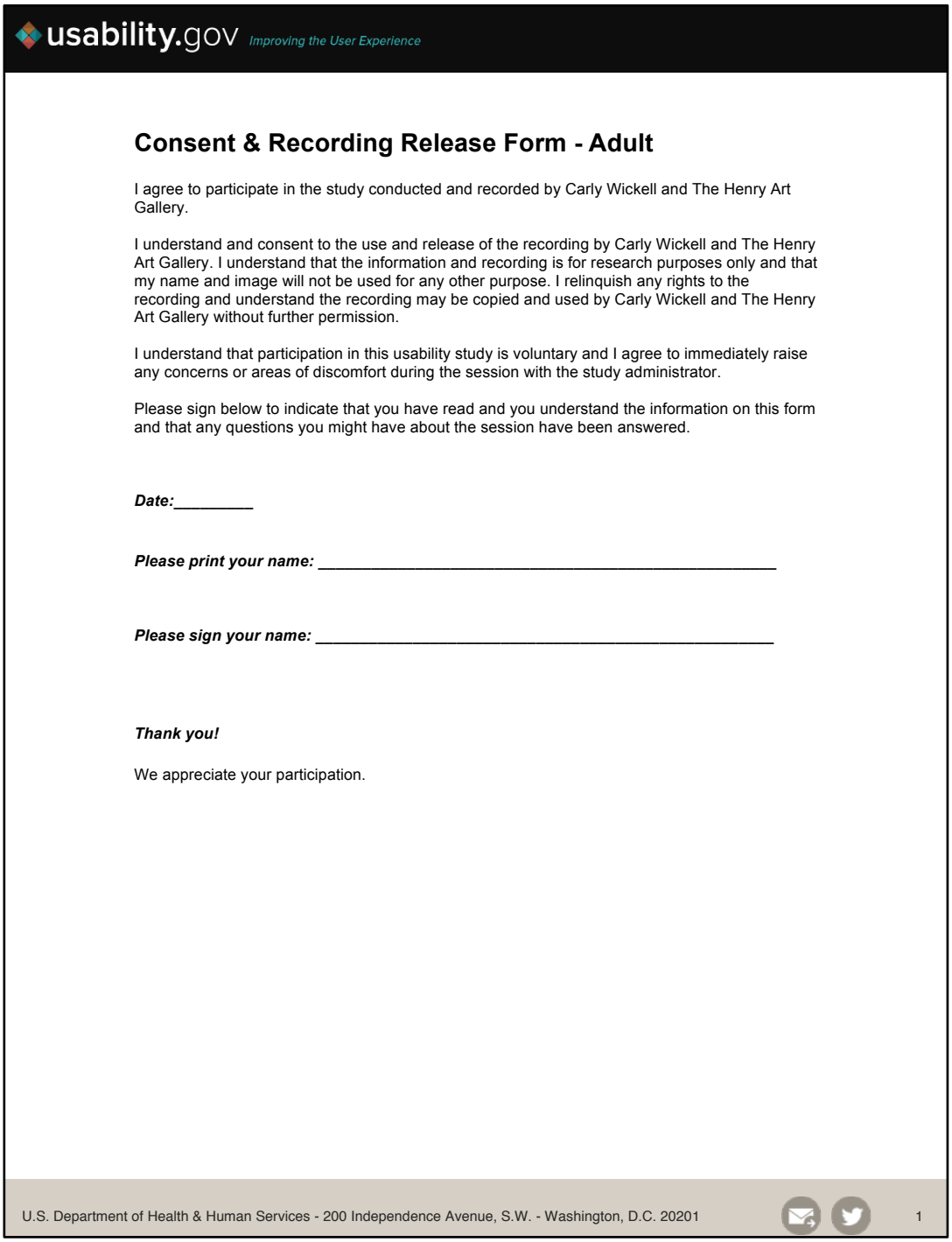
Rachael Faust
Assistant Curator of Collections & Academic Programs
Henry Art Gallery
206.616.9630

HENRYART.ORG
University of Washington / 15th Ave NE & NE 41st St / Box 351410 / Seattle, WA 98195-1410

Explore the HENRY's collection!
Search the collection through the **ONLINE DATABASE** or browse the **DIG MODULES**

Figure 2. UW researchers/academic staff and museum members call-to-participate

Of the 11 Henry staff, five participants were UW Museology Graduate students who held work-study roles at the museum. The five members of the Henry held varying occupations, and most of the UW researchers/academics were Doctoral or Masters candidates, with only one of the five a faculty member. All participants were asked to sign a digital video and audio recording consent form, with clear communication of the recording parameters. See **Figure 3** below for the Consent and Recording Release Form.



usability.gov Improving the User Experience

Consent & Recording Release Form - Adult

I agree to participate in the study conducted and recorded by Carly Wickell and The Henry Art Gallery.

I understand and consent to the use and release of the recording by Carly Wickell and The Henry Art Gallery. I understand that the information and recording is for research purposes only and that my name and image will not be used for any other purpose. I relinquish any rights to the recording and understand the recording may be copied and used by Carly Wickell and The Henry Art Gallery without further permission.

I understand that participation in this usability study is voluntary and I agree to immediately raise any concerns or areas of discomfort during the session with the study administrator.

Please sign below to indicate that you have read and you understand the information on this form and that any questions you might have about the session have been answered.

Date:_____

Please print your name: _____

Please sign your name: _____

Thank you!

We appreciate your participation.

Figure 3. Consent and Recording Release Form

Usability Testing

The usability tests utilized two different test metrics: a task-based approach and concurrent think aloud. This combination of testing techniques is designed to produce rich data for this study. "Task-based" refers to giving a participant a list of tasks to complete.[44] These tasks test different areas of the collections site and address real-world applications of online collections use. "Concurrent Think Aloud" involves the participant narrating their actions, giving insight into why they choose to click on certain links or follow a certain path to accomplish their task.[45] This also reveals if they encounter emotional events during the testing such as excitement, frustration, trepidation, etc. Concurrent think aloud can affect timing tasks and offer information about the user thought process. To measure reactions, the participants' computer screen and voice were recorded.

First click and successful search success rates will also be recorded. Computer Psychology, Inc., a company focused on usability, performed usability testing for the Center for Disease Control's website in 2006. It was during this time that they first introduced the concept of first click testing, and their results from 12 different usability tests showed that if the user clicked on the correct link as their first click, then their overall task completion was successful 87% of the time. To measure the first click success rate, tasks were designed with the quickest paths for task completion identified. Search and task completion success rates focus on the amount of times the participant successfully completes each task.[46]

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[44] Usability.gov. "Scenarios." (*Usability.gov.* http://www.usability.gov/how-to-and-tools/scenarious.html, accessed March 2014).
[45] Ibid.
[46] Bailey, Robert W, and Cari Wolfson. "FirstClick Usability Testing." (*Web Usability.* October 08, 2013. http://webusability.com/firstclick-usability-testing, accessed March 2014).

The task-based, concurrent think aloud usability test is comprised of eight steps for the participant to complete. Each participant began on the Henry home page, and would follow the tasks in order. The tasks were broken down into sections that define different areas of the site that the subject would be navigating. Task direction reads as follows: 1) Navigate to the online collections search, 2) Search for Photographs, 3) Search for photographs made by German photographers in the 1980's, 4) Return to main Collections page, 5) Navigate to the Digital Interactive Galleries, 6) Locate a video about a Northwest artist. Return to Digital Interactive Gallery home, 7) Find information about Textile Structures. Return to Digital Interactive Gallery home, 8) Locate a page on FSA photography. Return to Digital Interactive Gallery home. Due to the nature of the two parts of tasks six through eight, these tasks receive notation of "6a" and "6b" and so on during test analysis and reporting. The subject interaction was initially recorded with a camera focused on the computer screen. Screen recording allowed for further analysis of mouse movements and clicks that the subject neglected to voice during the usability test. After pilot testing, it was revealed the Screen Recording software offered voice recording as well. This streamlined the process and made it easier to code and analyze. It also seemed to help participants feel more at ease without a camera behind them. Finalized task scenarios can be seen in **Figure 4**.

PART ONE

1. Navigate to the online collections search.

PART TWO

2. Search for Photographs.
3. Search for photography made by German photographers during the 1980's.
4. Return to main Collections page.

PART THREE

5. Navigate to the Digital Interactive Galleries.
6. Locate a video about a Northwest artist. Return to Digital Interactive Gallery home.
7. Find information about Textile Structures. Return to Digital Interactive Gallery home.
8. Locate a page on FSA Photography. Return to Digital Interactive Gallery home.

Figure 4. Usability test task scenarios

Structured Interview Questions

After each usability test, participants were invited to participate in a short follow-up structured interview to discuss their use of the museum's online collection sites and speak about other museum sites they frequent. Having the structured interview follow usability testing afforded participants the ability to reflect on their usability testing experience. Interview questions were developed using feedback from stakeholders at the Henry combined with usability testing resources, such as published theses and articles on user testing and intuitive design.

Jared Spool, the founder of User Interface Engineering, is a software developer and programmer who has spent over a decade developing tools and best practices for usability evaluation. Spool developed a clear way of defining what intuitive design looks like. In his 2005 article, *What*

Makes a Design Seem 'Intuitive'?, he states that for a website to be considered intuitive, it should have two qualities:

- "Condition #1: Both the current knowledge point and the target knowledge point are identical. When the user walks up to the design, they know everything they need to operate it and complete their objective.

- Condition #2: The current knowledge point and the target knowledge point are separate, but the user is completely unaware the design is helping them bridge the gap. The user is being trained, but in a way that seems natural"[47]

The interviews addressed a range of questions designed to inform the Henry Art Gallery of the usefulness, usability, and overall user experience in relation to the current online collection sites, while exhibiting applicability to the museum field as a whole. The complete list of interview questions can be found below in **Figure 5**.

[47] Spool, Jared M. "What Makes a Design Seem 'Intuitive'?" *User Interface Engineering.* January 10, 2005. http://www.uie.com/articles/design_intuitive/ (accessed November 1, 2013).

1. Before you came in today, were you aware that the Henry has an online collections database that you can access at home?
    a. no - move to DIG questions
    b. yes – Have you used it before today?
        i. Yes - How many times do you think you've accessed in it the last 12 months?
            1. Do you remember why you last went to the online collections database?
            2. Do you remember having any problems finding what you wanted?
        ii. No – move to DIG questions
2. Before you came in today, were you aware that the Henry has digital interactive galleries that you can access at home?
    a. no - move to next question
    b. yes – Have you used it before today?
        i. Yes - How many times do you think you've accessed in it the last 12 months?
            1. Do you remember why you last went to the digital interactive galleries?
            2. Do you remember having any problems finding what you wanted?
3. Have you used any other museum's online databases in the past?
    a. Yes
        i. Which museum website did you visit?
        ii. Why did you go there?
        iii. Were there similarities or differences that stood out when compared to the Henry?
    b. No
        i. What did you think?
        ii. Is this how you thought an online collection would work?
4. In the next 6 months, could you imagine yourself using one of these two online resources?
5. I am going to show you three sheets, each with a screen shot of one of the digital interactive galleries on it. The Henry wants to know how they compare to each other.
    a. Which gallery was easiest for you to use?
        i. Why?
6. The Henry Art Gallery has implemented the ability to create an online account with the ability to log in and create your own digital galleries using objects from the collections database.
    a. Did you know about this feature?
        i. Yes
            1. Have you used it?
                a. Yes
                    i. Do you remember encountering any problems in the creation or managing of your gallery?
        ii. No
            1. Could you imaging this being useful to you?
    b. On scale 1-5 how likely do you think you would be to use this option the next time you are on the site, where 1 is highly unlikely and 5 is highly likely?

Figure 5. Structured interview questions.

Data Coding and Analysis

Computer monitor screen captures and audio were coded for: time spent per area, number of mouse clicks, amount of times the user had to use the back button or became lost, and overall speed at which user arrived at the information they were seeking. Interview responses were coded based on positive or negative response, and further divided into themes that arose during testing.

Chapter 4
Findings and Analysis

The purpose of this evaluation study was to explore what museum visitors expect to experience when accessing online collections. In order to answer this question, three specific questions were developed to guide the study:

1. What do museum visitors expect to find when they access an online collection?
2. How are they using the online collections?
3. How successful are their searches?

These three questions emerged from the literature review and responded to areas of information about stakeholder use of the Henry Art Gallery website identified by museum staff. These questions were used to guide the findings and analysis in the current chapter, along with results and discussions found in the Chapter 5.

What do museum visitors expect to find when they access a museum's online collection?

This question sought to determine visitor expectations of online museum collections, and was addressed through many of the structured interview questions that focus on participants' interaction with the Henry collections site as well as other museum websites.

Of the 20 participants interviewed, 20 (or 100%) stated that they were aware that the Henry Art Gallery had an online collections database that is accessible at home. When asked if they had used it prior to the usability testing, 14 (or 70%) stated that they had used it before that day. The 14 respondents who answered yes were asked how many times in the past 12 months they thought they had used it. As depicted below in **Figure 6**, three participants responded that they had not used the site in the past year, four participants stated they had used it one to two times in

the last year, three participants had accessed the site between three and five times in the last year, two participants had used the collections site six to ten times in the last year, and two participants stated a large frequency of visits in the 20 or more range over the last year.

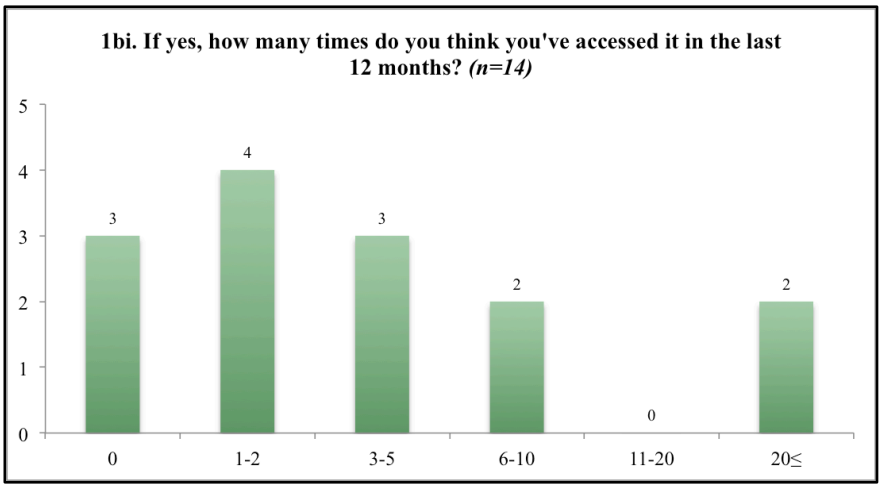


Figure 6. Interview question 1bi: If yes, how many times do you think you've accessed it in the last 12 months?

Participants were asked a similar line of questions based on their use of the Henry Art Gallery Digital Interactive Galleries (DIG). Of the 20 participants interviewed, 16 (or 80%) were aware that the Henry offered these specialized digital galleries that are accessible at home. Of the 16 participants who responded that they were aware of DIG, 11 (or 69%) stated that they had used it before the usability testing. As depicted below in **Figure 7**, two participants responded that they had not used the site in the past year, seven participants stated they had used it one to two times in the last year, one participant had accessed the site between three and six times in the last year, and one participant stated a large frequency of visits in the 20 or more range in the last year.

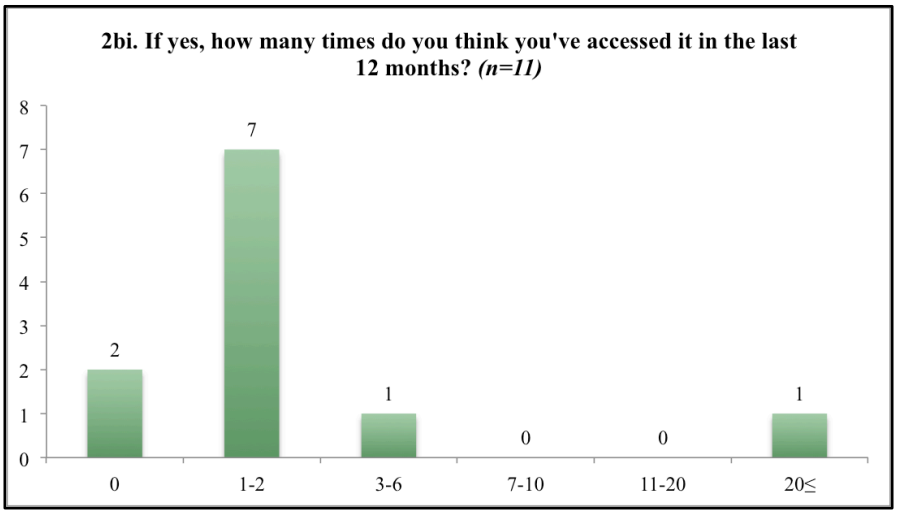


Figure 7. Interview question 2bi: If yes, how many times do you think you've accessed it in the last 12 months?

Participants were also asked about their past use of other museum online collections. When asked if they had used any other museum's online databases in the past, 13 of the 20 participants (or 65%) responded in the affirmative. Those 13 respondents were then asked which museum collections sites they had visited in the past, and were allowed to give multiple responses. The Metropolitan Museum of Art (MET) received the most mentions with five participants stating they had visited it in the past, Seattle Art Museum (SAM) received three mentions, Victoria and Albert museum (V&A) was mentioned by two participants, and the British Museum also received two mentions. Other museums noted as being visited by participants can be seen below in **Figure 8**.

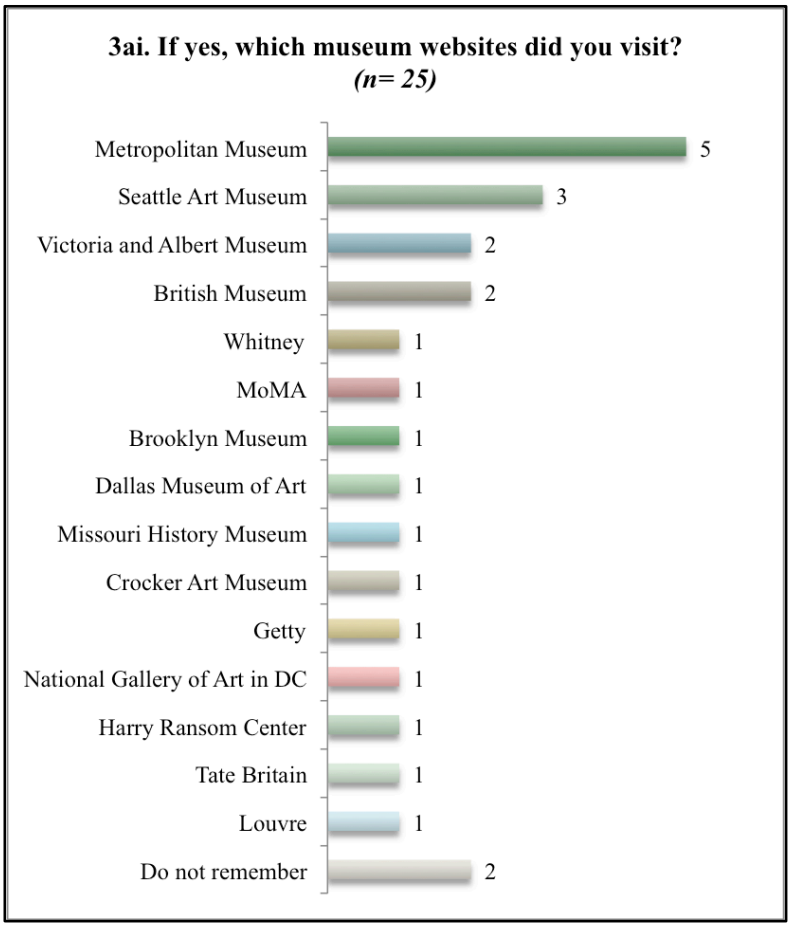


Figure 8. Interview question 3ai: If yes, which museum websites did you visit?

Participants were asked to speak to which DIG site was easiest for them to use, and were allowed to give multiple answers. The Costume and Textiles site received the highest number of positive mentions at 17, Photography and New Media at 10,and Northwest Artists at five. Representative quotes include the following:

> "Costumes and Textiles is very straightforward, Northwest Artists is very blog-like and not as easy for me, Photography is easy because of the timeline. Didn't like having all the text in the middle."
>
> "[On Photography and New Media] Timeline was nice. [On Northwest Artists] Layout is confusing - do artists relate to the links across from them? You shouldn't have a category about UW Faculty and not include everyone. [On Costumes and Textiles] The layout is nice and appealing, someone obviously put a lot of time into this."
>
> "[On Photography and New Media] Timeline is an interesting way of organizing all the data. The Costume and Textiles looks very, very, very detailed. I don't know if I will ever

> need it or wander through it, but the more you get into it the more you want to look for things, so it kind of promotes to go further."
>
> "[On Costume and Textiles] I really like the images, they are very inviting. I'm a visual person and am drawn to that. The page for Northwest artists seems just too much in your face all of a sudden, there is a whole lot of reading to do there. It would be greater if I could see the images of the artists next to their names. It's black and white and not very enticing."

The appeal for browsing visually is corroborated with data from the usability tests. The Costume and Textiles DIG site offers a choice between text links and links with a title and representative photo beneath them. Out of 18 successful tasks completed for Costume and Textiles, 13 (or 72%) of participants chose to click on the visual link.

How are museum visitors using and accessing online collections?

This question seeks to identify visitor motivation for using online collections as well as future intent for use. This section is addressed through many of the structured interview questions that focus on participants' interaction with the Henry collections site as well as other museum websites.

Fourteen participants had used the Henry's collections database in the past 12 months. Of those, five (or 36%) stated they visited the site for research or academic purposes – such as to prepare for a class, object information for a project, etc. Five more of the participants stated that they used the collections search for a specific query, such as searching for a specific artist, type of object, objects in a certain date range, etc. Three participants (or 21%) stated that they went to the collections search just to browse, with no specific purpose or query, and one participant stated that they could not recall why they last visited the collections database.

A similar line of questioning was asked of the nine participants who had used the DIG sites in the past 12 months. Four participants (or 44%) stated they went to the DIG sites for a specific

query, three participants (or 33%) could not recall why they went to the DIG sites, one participant (or 11%) stated they last used the DIG sites to browse, and the ninth participant cited visiting DIG for research and academic purposes.

The 12 participants who had used other museum online collections sites were also asked if they could remember why they last went. Eight participants (or 67%) stated they used the other institution's collections site for research and academic purposes, three participants (or 25%) cited visiting the other museum site for a specific query, and one participant (or 8%) stated they could not recall the reason for their last visit. Browsing the other museum collection was not given as a motivating factor in this instance.

To gauge the level of interest in future visitation to the online collections database and DIG sites, participants were asked if they could imagine themselves using one of the two resources in the next six months. Of the 20 participants, 17 (or 85%) stated that yes, they could see themselves using either the collections database or the DIG.

The Henry has launched a personal gallery option in the past year that allows users to create a login and account on the museum website, save and store favorite objects or collect images and information on objects for research purposes. Of the 20 participants, only three (or 15%) knew that this feature existed. Those three participants were asked if they had used it, and all responded that they had not. After explanation of the purpose and potential uses of the personal gallery, all 20 participants were asked if they could imagine it being useful to them. Fifteen (or 75%) stated yes, they could see the personal gallery being useful. One participant further clarified that it would depend on a need, as they saw using it for research purposes more than personal purposes. Participants also stated that they would rather be able to share objects from

the collection on their Pinterest board, rather than have it solely on the museum website.

Representative quotes include the following:

> "[Yes, I can see it being useful] with the caveat of doing research and not just for the fun of it."
>
> "The personal gallery doesn't make sense to me because I would want to share my gallery or have it public, I'd be more likely to grab the thumbnail and put it on my desktop or Tumblr. I don't see the point of having something closed off."
>
> "When I do something online, I would copy the information online into a word document with a link back to it, including saving a screen capture or copy of the image. I just don't want to have to create an account to track down information that I can save in a place that is easily more accessible for me."

These data are further corroborated in a rating scale for future use. All 20 participants were asked, on a scale of 1-5 where 1 is highly unlikely and 5 is highly likely, how likely they thought they would be to use the personal gallery option the next time they visited the Henry collections sites. One participant did not give a specific answer, stating that it would be dependent on need. Seven of the 19 remaining participants (or 37%) selected 1: highly unlikely, three participants (or 16%) selected 2: unlikely, two participants (or 11%) selected 3: neutral, one participant (or 5%) selected 4: likely, and six participants (or 32%) selected 5:highly likely.

How successful are searches performed by museum visitors on the online collections?

This question seeks to address visitor success rate for searches and ease of navigation of online museum collections. This section is addressed through structured interviews and usability testing that focused on participants' interaction with the Henry collections database and the Digital Interactive Galleries (DIG).

Structured Interviews

Of the 13 participants who had used the online collections database in the past 12 months, eight (or 62%) recalled having problems finding what they wanted. Representative quotes include the following:

> "Search was limited, no way to conceptually search. Ninety percent of what [my students and I] searched for that had any conceptual content was unsuccessful."
>
> "[There are] certain search fields that are intuitive and give you the results you want, like artist names. Dates, and I've used this website many times, I can never find the right way to format the date. That is usually where I hit the wall."
>
> "It's not familiar terminology for me, so I had to think out what I was looking for."

Of the six participants who had used the DIG sites in the past 12 months, four (or 67%) stated that they did not experience problems finding what they needed. One participant (or 17%) remembered having trouble, and described feeling intimidated by the layout of the Photography and New Media site. One participant could not recall whether or not he/she had problems during their last use. For the DIG sites, several participants noted that the last time they were there, they were browsing and not looking for something specific.

Usability Tests

All 20 participants were asked to complete a series of scenarios. First click success rate, overall task completion success rate, and time spent on task were recorded for each task.

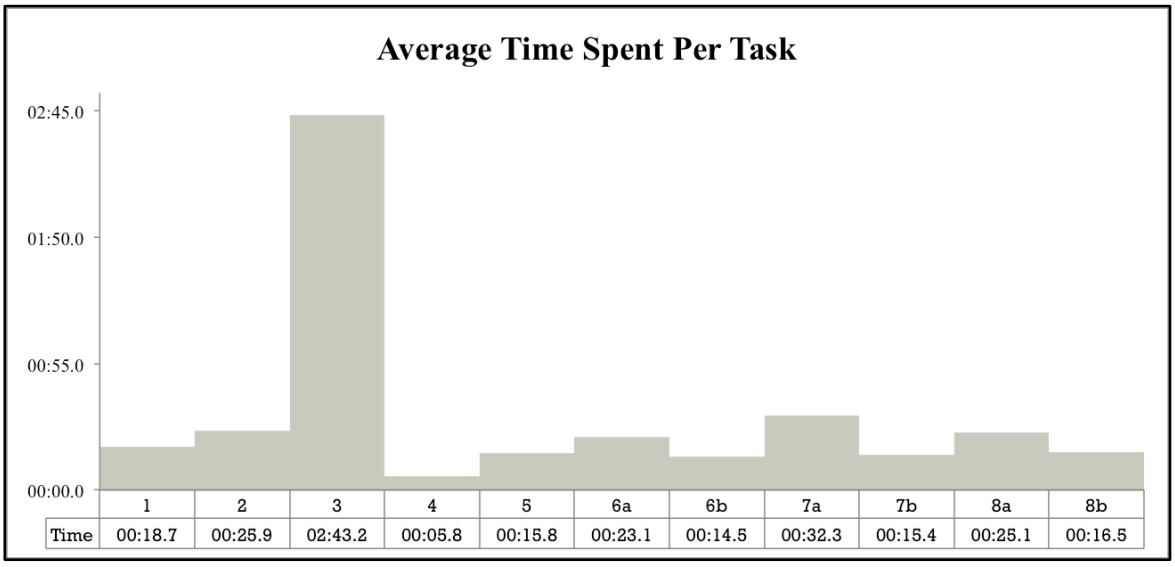
For Task 1 each participant began at the Henry home page and was prompted to navigate to the online collections search. This task would demonstrate whether the collections search location is clear and easy to find. The pre-identified best path for participants involved a first click on the Collection link on the Henry main page header. All 20 participants had successful first clicks. Fifteen participants (or 75%) successfully completed the task, with the remaining five participants stopping on the Collections main page – rather than continuing on to the Collections

Search – believing they had completed the task. The average time spent completing this task was 18.7 seconds, with a range of 5.9 seconds to 34 seconds.

Participants began the second task where the first ended, at the Henry Collections search page. This task directed participants to search for Photograph and was designed to have participants utilize a basic search, and investigate whether those searches are successful and intuitive. The successful first click identified was to click inside the basic search box. Three participants did not perform this task, moving to task three. Of the 17 participants who completed the task, 15 (or 88%) had successful first clicks, one participant clicked on the advanced search box, and one participant typed the search phrase in the search box located on the Henry top navigation panel. Sixteen participants (or 94%) successfully completed the task. The participant who chose to use top navigational search did not produce the correct results and gave up on the task. The average time spent completing this task was 25.9 seconds, with a range of 9.4 seconds to 1 minute 30.1 seconds.

Task 3 or The third task asked participants to search for photography made by German photographers during the 1980's. This task requires the use of the advanced search and seeks to investigate whether those searches are successful and intuitive. If done correctly, this query was to produce 13 results. The pre-identified correct first click was for the user to click on the advanced search option. Ten of the 20 participants (or 50%) had successful first clicks. Nine participants (or 45%) initially clicked the basic search box, and one participant scrolled through the collections search page, clicked the link to return to the Collections Main page, went back to collections search and saw the basic search box. Twelve participants (or 60%) were unable to successfully complete the task. In order to complete the task, participants were intended to use the advanced search and input the following criteria: Class: Photographs, Origin: Germany,

Earliest Year: Greater than or equal to 1980, Latest Year: Less Than or Equal to 1989. Many of the advanced searches were unsuccessful due to participants not selecting the right qualifier for the date range, selecting "equal to" rather than using "greater than or equal to" or "less than or equal to." Participants also voiced confusion over the term "Class" and most initially chose to list Photography under "Medium." Participants spent the longest amount of time on this task, as illustrated below in **Figure 9**, with an average time of 2 minutes 43.2 seconds, with a range from 28.2 seconds to one participant spending 5 minutes 28 seconds.



	1	2	3	4	5	6a	6b	7a	7b	8a	8b
Time	00:18.7	00:25.9	02:43.2	00:05.8	00:15.8	00:23.1	00:14.5	00:32.3	00:15.4	00:25.1	00:16.5

Figure 9. Average time spent per task

Task 4 or the fourth task directed participants to return to the main Collections page. This task would demonstrate whether the collections search location is clear and easy to find. The pre-identified best path for participants involved a first click on the Collection link on the Henry main page header. It should be noted that this is the primary first click option because it is the only option aside from participants clicking the back button on their browser multiple times. Seventeen participants (or 85%) had successful first clicks, one participant (or 5%) used the back button and then chose the correct Collections link from the top navigation, and two

participants (or 10%) clicked the back button until they arrived at the Collection Search home and stopped, believing they were at the correct page. The same ratio of successful first clicks applied to successful searches, with 17 participants (or 85%) successfully returning to the main Collections page, and three participants (or 15%) not completing the task successfully. This task took an average of 5.8 seconds to complete, with a range from 1.3 seconds to 11.8 seconds.

Task 5 directed participants to navigate to the DIG sites. This task would demonstrate whether the DIG location is clear and easy to find. The pre-identified best path for participants involved a first click on the DIG link on either the left side bar or the link located below the introductory text. Both links take visitors to the same location in roughly the same amount of time; therefore they were given equal weight for the purpose of this study. Nineteen participants (or 95%) successfully clicked on the correct link. One participant did not see the link in the left side column, and instead chose to click on the Exhibitions link in the top navigation, this was a thought echoed by other participants as they completed the task. Representative quotes are as follows:

> "Went to Exhibitions because that is where I would think that galleries would be."
>
> "If coming from collections search, it is not immediately apparent where the digital interactive gallery is located."

All 20 participants were able to successfully complete the task with an average time of 15.8 seconds, with a range from 2.1 seconds to 1 minute 37.2 seconds.

Tasks 1-5 aid to address visitor success rate for searches and ease of navigation of online museum collections through the collections database search. The final three tasks address visitor success rate for searches and ease of navigation of online museum collections through the DIG sites. Each of the following tasks have two parts, a search query and a prompt to return to DIG

homepage. Due to the similar nature participants behaved and comparative time spent on all three return prompts, the statistics for all three return prompts will be reported together at the end.

Task 6a asked participants to located a video about a Northwest artist. This task would demonstrate whether the Northwest Artist DIG location is clear and easy to find, and how intuitive it is in terms of locating desired information. The pre-identified best path for participants involved a first click on the Northwest Artists link on the DIG home page. All 20 participants (or 100%) had successful first clicks, however only 17 participants (or 85%) successfully completed the task. The three participants (or 15%) that did not complete the task arrived at the Northwest Artist home page and stopped, believing they had reached the correct task end point. The average time spent on this task was 23.1 seconds, with a range from 9.7 seconds to 1 minute 1.3 seconds.

Task 7a asked participants to locate information about textile structures. This task would demonstrate whether the Costume and Textiles DIG location is clear and easy to find, and how intuitive it is in terms of locating desired information. The pre-identified best path for participants involved a first click on the Northwest Artists link on the DIG home page. Eighteen participants (or 90%) had successful first clicks, with both participants who were not successful going back to the Collections search page. The same 18 participants completed the task successfully, with the two participants with incorrect first clicks not completing the task. Both of the participants who were unsuccessful chose to go to the Collections search page and do a search for textile structures. The average time spent completing this task was 32.3 seconds, with a range from 11.2 seconds to 1 minute 31.9 seconds.

Task 8a asked participants to located a page on FSA Photography. This task would demonstrate whether the Photography and New Media DIG location is clear and easy to find, and how intuitive it is in terms of locating desired information. The pre-identified best path for participants involved a first click on the Photography and New Media link on the DIG home page. All 20 participants (or 100%) were both successful with their first clicks and successfully completed the task. The average time spent on this task was 25.1 seconds, with a range from 8.9 seconds to 1 minute 16.9 seconds. It should be noted that the longest time was due to the page taking longer to load.

Participants were asked to return to the DIG home page after each of the above three tasks. This was to illustrate how participants were finding their way back, as there is not a link on any of the individual DIG sites that will return them to the DIG home or Collections main page. Because of this, there is not a first click measurable for these tasks. Successful task completion rates and time spent on task were calculated.

For task 6b, return to DIG home page, 18 participants (or 90%) were successfull. Of the two participants who did not complete the task, one participant clicked on the Henry H on the top right corner and was returned to the Henry Art Gallery main page, where they stayed. The other participant clicked the back button and passed DIG home page, landing on the Collections main page and remaining there. This first attempt to return to DIG home page took participants an average time of 14.5 seconds, with a range from 1.7 seconds to 1 minute 15.8 seconds.

Task 7b showed improvements, with 19 participants (or 95%) successfully completing the prompt. One participant had been incorrectly using the Collections search for Task 7a, clicked the back button to the main Collections search page and stayed there. The second attempt to

return home from a DIG site resulted in an average time of 15.4 seconds, with a range from 4.6 seconds to 30.5 seconds.

Three participants did not complete Task 8b, believing they were done with the usability test and staying on the FSA Photography page. Of the 17 participants who did attempt to return to the DIG home page, 16 (or 94%) were successful. The participant who did attempt to return and did not complete clicked on the Introduction link in the top navigation of the Photography and New Media site. They stayed on that home page and did not continue to DIG home page. The average time spent to complete this task was 16.5 seconds, with a range from 3.6 seconds to 41 seconds. The lack of a proper return option on the individual DIG sites became frustrating for participants, as representative in the comments made during those tasks as follows:

> "Not an obvious way to get back, so I'm just going to click the back button until I get there, which is annoying"
>
> "Not intuitive"
>
> "UGH" [After trying to find a back button on the final task]

Limitations

Sample: This sample size was larger than what the literature points to needing, with 20 participants rather than five.[48] However, this sample was limited to stakeholders of the Henry Art Gallery, and did not seek data from participants with no affiliation with the museum. This makes this data set an important view of how these participants use the online collection sites, but can not be generalized to how all typical users navigate the site.

[48] Usability.gov. "Running a Usability Test."

Interview Sample Demographics: This information was not recorded; therefore comparisons cannot be drawn between age, gender, or computer proficiency and the data collected. This data did not appeal to the staff of the Henry when this instrument was initially designed, and the information about the sample and how age or computer proficiency relates to timing and success rates of tasks is not available.

Coding Subjectivity: There is a level of subjectivity that is inherent to analysis of any qualitative data, such as commentary during usability testing and answers to open-ended questions during the structured interviews. Data coding and analysis was limited to one individual, which allowed for consistency while still being subjective to that individual.

Amount of Data: The large amount of data collected could provide further results and undergo further analysis. For the purpose of this study, certain elements of this evaluative study were not relevant and were not included in reporting.

Chapter 5
Discussion and Results

What do museum visitors expect to find when they access a museum's online collection?

Based on the analysis of the findings in Chapter 4, users expect to encounter difficulty when navigating museum collections online, emphasizing a need for clearer search options and a wider variety of ways to obtain object information. Structured interview questions established that stakeholders are generally aware that the Henry offers online collections access and has Digital Interactive Galleries available for use at home, but most users are not accessing these areas on a regular basis. Some participants seemed to feel overwhelmed by the online search mechanisms and the text that accompanies them. This question addressed the concept of usefulness discussed in Chapter 2, and identified ways the site could become more useful to online visitors. The complications identified in the findings were similar to those voiced in the research performed by Hong (Iris) Xie, with participants stating that they sometimes feel overwhelmed by the process of using online collections and the need for the design to be more intuitive. Currently, the visitors are finding the collections search useful and some participants who used it or the DIG sites for the first time during testing noted potential future use.

How are museum visitors using and accessing online collections?

Based on the analysis of the findings in Chapter 4, users are accessing the online collections sites for research and academic purposes, specific queries, and to browse. Visitors stated they wanted to see more relationships between exhibitions and collections, and to be able to browse the objects that are linked to past or present exhibitions. This question further identified the concept of usefulness, discussed in Chapter 2, of the online collection sites from a visitor perspective. For

instance, many participants did not find the idea of the personal gallery useful unless they had a specific reason, such as research purposes, to create one. Many of these participants stated that they would rather be able to share the images on social media. Since the sharing of object pictures and information is not facilitated by the Henry site, many are taking screen captures of them to place on their personal computers or to then post to their social media accounts such as Tumblr, Pinterest, and Facebook.

How successful are searches performed by museum visitors on the online collections?

Based on the analysis of the findings in Chapter 4, searches seem to be only as successful as the subject was perseverant. When faced with the specific search query regarding German Photographers, many participants gave up due to frustration; a handful powered through stubbornly and relentlessly until they were successful, and only one participant accomplished the task on the first try. Even though a large amount of participants entered the correct information in the advanced search or basic search boxes, the constrained search parameters meant that they received a “no matching records” message for small mistakes.

Chapter 6
Conclusions and Recommendations

Conclusions

This evaluation study resulted in three main conclusions. The first and most significant conclusion was that the advanced search mechanism is not usable to most participants. The second conclusion was that participants see object relationships and contextual information as useful. The final conclusion was that participants want to be able to share favorite objects from the collection, and that offering this would heighten their user experience. These conclusions are framed within the guiding research questions: What do museum visitors expect to find when they access an online collection, how are they using the online collections, and how successful are their searches?

How successful are searches performed by museum visitors on the online collections?

Further analysis of the advanced search features needs to be performed. Key issues noted during the advanced search was, as stated in Chapter 5, the strict search parameters in place which do not allow room for error as well as terminology boundaries. This is supported by Anne Gilliland-Swetland and Layna White's research discussed in Chapter 2, which revealed how museum professionals and their visitors may not have the same ideas of terminology. There is a disconnect between what the museum feels is understandable and what the user felt they understood, particularly when it comes to the term "Class" which encompasses what most users considered to be "Medium." In most cases, once the participant figured out they could select from the value listing, they tried to select "Photographs" or "Photography" under medium but could only find specific types of photography.

What do museum visitors expect to find when they access a museum's online collection? coincides with Kravchyna and Hastings' results around the necessity of easy navigation and search tools in Chapter 2, users valued the ability to view collections through relationships. Once they find an object, artist, medium, etc. they are interested in, there is a link to similar objects within reach.

How are museum visitors using and accessing online collections?
Participants value the ability to share an object to social media such as Tumblr, Pinterest, or Facebook is something that is important to these users. An area mentioned in Chapter 2, Michael Govan of LACMA told the Getty Foundation Initiative that it was critical to his institution to remain relevant to the public. This mindset is one to embrace, because addressing what visitors want from an online experience will produce more return visits and will positively impact the reach of the museum. Participants want to give credit to artists, and show their favorite styles of art, and concepts. One participant, and artist, voiced that they would also like to incorporate this feature. Participants have an idea of the complexities of obtaining copyright, but they do not understand why they are unable to share objects that have the tombstone information embedded within the image. Participants recognize the usability of a personal gallery for research purposes, but do not want to keep a personal, "for fun" gallery contained within one museum website.

Recommendations

This study resulted in eight key recommendations for the Henry Art Gallery. The first recommendation is to merge the collection search and the Digital Interactive Galleries, ensuring there is a clear path to and from each area so visitors do not become lost. The second recommendation is to incorporate more visual search elements into the collections search – visual learners need a search option that appeals to them. The third recommendation is to connect

objects in the collection to exhibitions, allow users to see which objects are a part of the exhibition within the main exhibit page. The fourth recommendation is to connect similar objects, artists, or themes so that when a user performs a search or views an object; they can also see what is similar rather than having to do multiple searches. The fifth recommendation is to create a clearer advanced search box - if participants do not notice it then they will not use it. The sixth recommendation is to address terminology used on the collections site, for example: "Medium" should be changed to "Type" and the category of "Class" should be renamed as "Medium." Adding general terms to the search function, as well as concepts or themes will expand the usability of the database. The seventh recommendation is to keep the personal gallery option, but advertise it on the site to researchers who are interested in using the study center – participants saw value in this tool from a research standpoint so target this tool to that audience. The eigth and final recommendation is to create a Pinterest page for the museum.

The Henry Art Gallery is poised in the perfect position to make some of these needed changes in order to improve the usefulness and usability of their online collections sites while undergoing the next phase of a website redesign. By improving usefulness and usability, visitor experience has the potential to increase and, as seen through the Getty Foundation Initiative discussed in Chapter 2, visitation could also increase. It is strongly recommended for the Henry to perform small batches of user testing at each key stage of implementation of these recommendations in order to gauge how the changes affect the end users and to identify any other areas of improvement. This sounds time consuming, but it will produce the best results.

Future research into the characteristics of general users is recommended as well as looking at further combined efforts of multiple institutions to address the evaluation questions outlined in this study.

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Appendix A - Charts

Interview Charts

ID	1a	1b	1bi	1bi1	1bi2	2	2a	2b	2bi	2bi1	2bi2
P1	Y	y	10	To set up	No	y		y	2	No	
S1	Y	y	1-2	Explore.	No	y		N			
S2	Y	y	0	No		Y		N			
S3	Y	y	1-2	Costume	No, browsing		N				
S4	Y	y	6	Costumes	Not everything was digital, so that was disappointing. Was able to get a	y		Y	1	Cost	No
S5	Y	y	0	Class	Search was limited, no way to conceptually search. 90% of what they	y		y	0		
S6	Y	y	1	Searching	I don't think so, it wasn't hard enough that I gave up	y		y	1	Can't	
S7	Y	y	1-2	Looking	No, because I can search for the acc #	y		y	0		
S8	Y	y	4-5	I wanted	I first tried with Johnson, then tried photography and used the advanced	y		y	1	I	No, but it was
S9	Y	N				y		y	2	Jeffre	No
S10	Y	N				y		N			
S11	Y	y	0	Right	I don't remember being pleased with it and felt that it probably needed		N				
S12	Y	y	50	Research	I went to look for a photograph and I entered the title and artist and it	Y		N			
S13	Y	N				y		N			
S14	Y	y	40	Worksho	Certain search fields that are intuitive and give you the results you	y		y	40+	Cost	No, but it's
S15	Y	y	3-5	Looking	I found what I wanted, there just weren't pictures so I wasn't sure if I	y		y	1	Just	Since I was
S16	Y	N					N				
S17	Y	N				Y		Y	1	Rese	Yes, the
S18	Y	N					N				
S19	y	Y	5	Trying	It's not familiar terminology for me, so I had to think out what I was	Y		Y	4-6	No	

3a	3ai	3aii	3aiii	3b	3bi	3bii	4	5a	5ai	6a	6ai	6ai1	6ai1a	6ai1ai	6aii	6aii1	6b	Comments/Quotes
Y	Met	Rese	Henry				y	Photo	Timelin	N						Y	5	
Y	SAM	Miro	Spoke				y	Costu	"Tree"	N						Y	5	
Y	SAM	Rese	SAM				y	Costu	C/T	N						Y	3	Onli
N				N	Stylis		y	Photo	Possibl	N						Y	Depend	Disa
Y	MET, VNA,	Rese	Feel all				y	Costu	Timelin	N						Y	5	
Y	I can't						N	Costu	PNM:	N						Y	5	Onli
Y	National	Most	Haven't				y	Costu	Very	N						Y	4	If I
N				N	Thou	I	y	Photo	PNM:	Y		N				N	1	I
N			I have				y	Photo	Timelin	N						Y	5	High
N				N	*See	Yes, I	N	North	Photogr	N						Y	2	
Y	Whitney,	Rese	Whitne			I	N	Photo	I didn't	N						N	1	I can
N				N	Indivi		y	Photo	Becaus	N						Y	1	I use
Y	MoMA	No I	Biggest				y	Costu	I	N						Y	5	
N				N	It	I had	y	Costu	NW	N						N	1	It is
y	Brooklyn	Whe	I find				y	Photo	Photogr	Y		N				Y	2	
y	Dallas	MH	Basic				y	Costu	I like	N						Y	1	
y	I can't	Rese	I went				y	Costu	My	N						Y	3	
y	Crocker Art	Obje	Some				y	Photo	I liked	N						N	1	Gell
Y	MET, Victoria	Rese	When I				y	Photo	Timelin	N						N	2	I
N				N	Well		y	Costu	I like	Y		N				Y	1	

Usability Testing Charts

Task	rst	ces	Time	Nature/Steps	Comments
1. [Beginning at the HAG Home Page] Navigate to the online collections search.	Y	Y	00:33.3	Direct route, sav	
	Y	Y	00:20.7	Direct route, sav	
	Y	Y	00:17.9	Direct route, sav	
	Y	Y	00:18.2	Direct route, sav	
	Y	N	00:13.2	Direct route, sav	
	Y	N	00:12.0	Direct route, sav	
	Y	Y	00:08.5	Direct route, saw lir	
	Y	Y	00:08.5	Direct route, saw lir	
	Y	Y	00:26.0	Direct route, saw lir	
	Y	Y	00:20.5	Direct route, saw lir	
	Y	Y	00:14.7	Direct route, sav	
	Y	N	00:30.8	Direct route, sav	
	Y	Y	00:16.5	Direct route, sav	
	Y	N	00:05.9	Direct route, sav	
	Y	Y	00:10.3	Direct route, sav	
	Y	Y	00:12.5	Direct route, sav	
	Y	Y	00:34.0	Direct route, sav	
	Y	Y	00:24.0	Direct route, sav	
	Y	Y	00:23.4	Direct route, sav	
	Y	N	00:22.4	Direct route, sav	

2. Search for Photographs.	Y	Y	00:09.6	Went straight to	A lot of photographs. A lot of text on welcome page, maybe more of a brief summary. Thought front search page is more daunting than needs to be.
	Y	Y	00:32.9	Scrolled>Checke	
	Y	Y	00:11.7	Went straight to	
	Y	Y	00:13.5	Scrolled page, th	
	Y	Y	00:21.4	Went straight to	
	Y	Y	00:50.5	Read collections	
	Y	Y	00:04.6	Went straight to	
	Y	Y	00:15.0	Went straight to	
	N	NA	NA	Did not perform	
	N	NA	NA	Did not perform	
	Y	Y	00:12.2	Went straight to	
	Y	Y	01:30.1	Scrolled page, th	
	Y	Y	00:13.8	Went straight to	
	N	N	00:42.2	Search box at to	
	Y	Y	00:08.8	Went straight to	
	N	Y	00:55.6	Went to Advanc	
	Y	Y	00:09.4	Went straight to	
	Y	Y	00:18.5	Went straight to	
	Y	Y	00:30.2	Scrolled page, re	
	N	NA	NA	Did not perform	

3. Search for photography made by German photographers during the 1980's.	N	N	04:41.7	Basic search	Went to choose value after 2 failed attempts at advanced search. Dating set to "equal to" rather than "greater than/equal." Had to use values for all search areas in order to attain results. Stated did not know what class means, German in culture? Wound up using list view, used date order (eventually), "found" using list view. Advanced search is very small. Concern with advanced search, not sure how specific it is to terms in catalogue. Date made is confusing. German ->culture vs origin. "Class"
	N	Y	03:36.3	Basic search	
	N	N	03:40.9	Basic search	
	N	N	00:28.2	Basic search	
	Y	Y	02:31.9	Advanced	
	N	N	02:27.3	Basic search box	
	Y	N	01:27.9	Advanced	
	Y	N	02:35.8	Advanced	
	Y	Y	02:44.0	Advanced	
	Y	Y	03:07.2	Advanced	
	N	N	01:51.5	Basic search>Did	
	N	N	02:04.8	Scrolled>Back to	
	Y	Y	05:28.0	Advanced	
	N	N	01:47.7	Basic	
	Y	Y	01:13.4	Advanced	
	Y	N	01:20.4	Advanced	
	N	Y	04:36.2	Basic search with	
	Y	N	04:35.4	Advanced	
	N	N	02:29.9	Basic search	
	Y	Y	01:35.1	Advanced	

4. Return to main Collections page.	N	N	00:04.4	Clicked collectio	Collections search link clicked, returned to search home rather than collections home. Like that Collections in top nav remains highlighted pink to guide how to get back.
	Y	Y	00:06.7	Scrolled page>C	
	Y	Y	00:04.5	Collections top r	
	Y	Y	00:05.3	Collections top r	
	Y	Y	00:11.8	Collections top r	
	N	N	00:10.8	Clicked collectio	
	Y	Y	00:04.0	Collections top r	
	Y	Y	00:04.5	Collections top r	
	Y	Y	00:02.0	Collections top r	
	Y	Y	00:05.8	Collections top r	
	N	Y	00:08.5	Collections Searc	
	Y	Y	00:07.0	Collections top r	
	Y	N	00:08.8	Collections searc	
	Y	Y	00:03.8	Collections top r	
	Y	Y	00:05.5	Clicked back but	
	Y	Y	00:03.5	Collections top r	
	Y	Y	00:10.9	Collections top r	
	Y	Y	00:04.4	Collections top r	
	Y	Y	00:02.8	Collections top r	
	Y	Y	00:01.3	Collections top r	

5. Navigate to the Digital Interactive Galleries.	Y	Y	00:19.4	Went straight to	Went to Exhibitions because that is where I would think that galleries would be. If coming from collections search, it is not immediately apparent where DIG is located.
	Y	Y	00:05.0	Went straight to	
	Y	Y	00:02.8	Went straight to	
	Y	Y	00:14.9	Almost went to	
	Y	Y	00:32.8	Scrolled page>S	
	Y	Y	00:22.8	Scrolled page>cl	
	Y	Y	00:03.0	Went straight to	
	Y	Y	00:06.4	Went straight to	
	Y	Y	00:07.6	Scrolled page>cl	
	Y	Y	00:02.2	Went straight to	
	Y	Y	00:03.2	Went straight to	
	Y	Y	00:10.5	Went straight to	
	Y	Y	00:40.6	From collections	
	Y	Y	00:20.0	First looked thro	
	Y	Y	00:02.1	Went straight to	
	Y	Y	00:07.2	Went straight to	
	N	Y	01:37.2	Went to Exhibiti	
	Y	Y	00:04.4	Scrolled page>S	
	Y	Y	00:11.2	Scrolled page>C	
	Y	Y	00:03.5	Went straight to	

6a. Locate a video about a Northwest artist.	Y	Y	00:15.4	NW link>scrolled	
	Y	N	00:22.2	NW link>scrolled	
	Y	Y	00:19.3	NW link>scrolled	
	Y	Y	00:39.9	NW link>scrolled	
	Y	Y	00:25.2	NW link>scrolled	
	Y	Y	00:17.0	NW link>scrolled	
	Y	Y	00:30.9	NW link>scrolled	
	Y	Y	00:13.2	NW link>scrolled	
	Y	Y	00:36.1	NW link>scrolled	
	Y	Y	00:10.8	NW link>scrolled	
	Y	N	00:09.7	NW link>scrolled	
	Y	Y	00:17.1	NW link>scrolled	
	Y	Y	00:21.0	NW link>scrolled	
	Y	Y	00:29.8	NW link>scrolled	
	Y	Y	00:12.8	NW link>scrolled	
	Y	Y	00:22.3	NW link>scrolled	
	Y	Y	00:29.7	NW link>scrolled	
	Y	N	00:17.9	NW link>scrolled	
	Y	Y	01:01.3	NW link>scrolled	
	Y	Y	00:09.7	NW link>scrolled	

6b. Return to Digital Interactive Gallery home.	N	Y	00:09.2	Scrolled page, did r	"Clicking the Henry H to see where that takes me" and surprise when all the way back to Henry main page. "Not an obvious way to get back, so I'm just going to click the back button until I get there, which is annoying"
	N	N	00:03.7	Scrolled page, did r	
	N	Y	00:14.0	Scrolled page>Clicl	
	N	Y	00:02.2	Clicked back buttor	
	N	Y	00:18.7	Scrolled page, did r	
	N	Y	00:05.0	Scrolled page, did r	
	N	Y	00:11.6	Scrolled page>Char	
	N	Y	00:26.8	Scrolled page>Clicl	
	N	Y	00:06.5	Clicked back buttor	
	N	Y	00:04.3	Changed url (took c	
	N	Y	00:01.7	Clicked back buttor	
	N	N	01:15.8	Scrolled page, did r	
	N	Y	00:17.2	Scrolled page, did r	
	N	Y	00:19.8	Scrolled page, did r	
	N	Y	00:04.9	Scrolled page, did r	
	N	Y	00:18.9	Scrolled page>Clicl	
	N	Y	00:18.3	Scrolled page, did r	
	N	Y	00:04.0	Scrolled page, did r	
	N	Y	00:04.2	Clicked back buttor	
	N	Y	00:23.7	Scrolled page, did r	

7a. Find information about Textile Structures.	Y	Y	00:16.9	DIG>CostText>P	Assuming photo textile link and upper textile link take to same place. Curious as to whether "Resources" would have textile structures or if go under Textiles for best/quickest. Not sure what "Structures" meant so almost did not continue deeper into CT page. Not sure what Structures meant, but figured they may be located under Textiles (from home). "A lot of text" in reference to main page. Would have preferred the information text at the top of the page, to explain what textile structures were
	N	N	01:31.9	Went all the way	
	Y	Y	00:18.2	DIG>CostText>P	
	Y	Y	00:12.4	DIG>CostText>U	
	Y	Y	00:57.2	DIG>CostText>P	
	Y	Y	00:46.2	DIG>CostText>U	
	Y	Y	00:25.2	DIG>CostText>P	
	Y	Y	00:14.7	DIG>CostText>P	
	Y	Y	00:28.8	DIG>CostText>P	
	Y	Y	00:11.2	DIG>CostText>P	
	Y	Y	00:16.2	DIG>CostText>U	
	N	N	01:08.7	Collections Main	
	Y	Y	00:27.1	DIG>CostText>P	
	Y	Y	00:46.8	DIG>CostText>U	
	Y	Y	00:12.1	DIG>CostText>U	
	Y	Y	00:27.2	DIG>CostText>P	
	Y	Y	00:36.7	DIG>CostText>P	
	Y	Y	00:26.9	DIG>CostText>S	
	Y	Y	00:46.3	DIG>CostText>S	
	Y	Y	00:15.4	DIG>CostText>P	

7b. Return to Digital Interactive Gallery home.	N	Y	00:07.2	Hit back button unti	
	N	Y	00:06.7	Hit back button to C	
	N	Y	00:17.4	Hit back button>scr	
	N	Y	00:22.8	Hit back button unti	
	N	Y	00:27.2	Scrolled page>Hit b	
	N	Y	00:27.8	Scrolled each page	
	N	Y	00:08.9	Scrolled page>Char	
	N	Y	00:16.9	Tried to click CT Ti	
	N	Y	00:17.9	Clicked back button	
	N	Y	00:04.6	Changed url (took c	
	N	Y	00:13.3	Scrolled page, did n	
	N	N	00:30.5	From collections se	
	N	Y	00:12.4	Hit back button unti	
	N	Y	00:20.1	Scrolled page, did n	
	N	Y	00:03.6	Hit back button unti	
	N	Y	00:14.6	Scrolled page, did n	
	N	Y	00:12.7	Scrolled page, did n	Not sure how else to get
	N	Y	00:17.5	Clicked Henry H>C	back except back button,
	N	Y	00:11.6	Clicked back button	seems easiest. "Not
	N	Y	00:13.5	Clicked back button	intuitive"

8a. Locate a page on FSA Photography.	Y	Y	00:10.4	DIG>Photo>Timeli	
	Y	Y	00:23.3	DIG>Photo>Timeli	
	Y	Y	01:16.9	*took longer to load	
	Y	Y	00:08.9	DIG>Photo>Timeli	
	Y	Y	00:48.0	DIG>Photo>Saw ti	
	Y	Y	00:21.3	DIG>Photo>Timeli	
	Y	Y	00:19.3	DIG>Photo>Timeli	
	Y	Y	00:16.9	DIG>Photo>Saw ti	
	Y	Y	00:15.0	DIG>Photo>Scrolle	
	Y	Y	00:21.6	DIG>Photo>Scrolle	
	Y	Y	00:11.2	DIG>Photo>Timeli	
	Y	Y	00:18.6	DIG>Photo>Scrolle	
	Y	Y	00:24.1	DIG>Photo>Scrolle	
	Y	Y	00:44.4	DIG>Photo>Timeli	
	Y	Y	00:21.8	DIG>Photo>Timeli	Seemed daunting and a lot
	Y	Y	00:24.7	DIG>Photo>Timeli	of information at first.
	Y	Y	00:22.1	DIG>Photo>Timeli	Would like a search box
	Y	Y	00:20.7	DIG>Photo>Timeli	available. "Oh, god" -
	Y	Y	00:35.5	DIG>Photo>Timeli	daunting until noticed link
	Y	Y	00:16.5	DIG>Photo>Timeli	on timeline.

8b. Return to Digital Interactive Gallery home.	N	NA	NA	Did not return to DI	Back button sometimes will not work properly to allow leaving site (click back and it keeps trapped on same page). "UGH" after trying to find a back button.
	N	NA	NA	Did not return to DI	
	N	Y	00:12.1	Hit back button unti	
	N	Y	00:15.3	Hit back button unti	
	N	Y	00:22.2	Scrolled page, did n	
	N	Y	00:41.0	Scrolled page, did n	
	N	NA	NA	Did not return to DI	
	N	Y	00:17.2	Clicked Intro>click	
	N	N	00:28.1	Clicked Intro>Belie	
	N	Y	00:06.6	Changed url (took c	
	N	Y	00:11.4	Scrolled page, did n	
	N	Y	00:35.6	Scrolled page, did n	
	N	Y	00:11.5	Clicked PhotoNM t	
	N	Y	00:03.6	Hit back button unti	
	N	Y	00:09.8	Hit back button>Pa	
	N	Y	00:11.1	Clicked Henry H>C	
	N	Y	00:11.6	Clicked back buttor	
	N	Y	00:17.8	Clicked Henry H>C	
	N	Y	00:05.5	Selected DIG page	
	N	Y	00:20.7	Scrolled page, did n	