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In this thesis the researcher documents the research, design, and evaluation process undertaken to answer the question - how does one balance interaction with and preservation of artifacts within the museum setting? Topics researched in pursuit of the answer to this question include material culture, theories of learning, and preservation. Material culture focuses on the interpretation of artifacts and aided the designer in developing the story each of Dolley Madison's artifacts told within the exhibit. The four theories of learning explored by the designer included stimulus-response, expository-didactic, discovery, and constructivist. These theories served as inspirations for developing an exhibit layout, with a focus on discovery and constructivist theories for the interactive experiences. Preservation theory coupled with knowledge of preservation needs of artifacts within museums assisted the researcher in developing safe environments to ensure the longevity of the artifacts. An evaluation process provided significant information to help assess the success of balancing interpretation and preservation needs. The compilation of this information provides a resource for those interested in learning about interactivity and preservation in the museum environment.

BALANCING PRESERVATION AND INTERACTION IN THE MUSEUM SETTING

by

Amanda E. Wade

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Approved by

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Committee Chair

To my mom and step-dad,  
Nancy and Jim Short,  
for your enduring encouragement, advice, and loving support.

APPROVAL PAGE

This thesis has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

Committee Chair \_\_\_\_\_

Committee Members \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Date of Acceptance by Committee

\_\_\_\_\_  
Date of Final Oral Examination



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# **CHAPTER I**

## **INTRODUCTION**

### **Statement of the Problem**

“Museums are no longer dead zones or monuments to the past. Nor are they simply vanity sites, tributes to wealth, power, or the self-congratulations of mankind lording over other animal species, or of one race of humans reigning over another” (Dubin, 1999, 227). Museums display artifacts for the purpose of education; however visitors often remain detached and removed from these artifacts by glass cases and barriers. These barriers limit the visitors’ ability to engage and interpret the artifacts for themselves. Commonly, museum exhibit designers’ lay out the museum in a linear format with information at the end of an exhibit building upon information from the beginning. These tactics often employed in history and art museums allow a visual comparison of each item to the items surrounding it, however this straightforward method of presentation leaves little room for the visitor to ask questions or engage the exhibit.

### **Purpose of the Project**

This design project investigates and explores methods of interaction within museum exhibits with a specific focus on the Greensboro Historical Museum as a theoretical exhibit site. This thesis explores the question - how does a designer balance visitor interaction with the preservation of artifacts? The designer considered this question in the contexts of material culture, preservation theory, and theories of learning

with a focus on stimulus-response, expository-didactic, discovery, and constructivist learning theories, chosen because they represent the dominant theories used within the museum setting. The theories of discovery and constructivist learning especially helped guide the designer in the design process where the designer examined several options of interaction from low level interaction, opening a drawer and flipping a panel, to high level interaction, trying on clothing and using computers. Though artifact preservation remained a concern for the designer; sometimes the designer pushed aside this concern to explore a wider array of more engaging artifact displays.

### **Organization of the Thesis**

The designer/ researcher, who are one and the same person, organized this thesis into six chapters including an introduction, literature review, museum case studies, methodologies, analysis, and conclusion. Chapter I provides a brief overview of the thesis by outlining and defining the research problem, providing an overview of the research topics that aided in development of this thesis, and outlining the chapters.

In Chapter II, the researcher presents the literature review in the form of a summary of information gathered on topics related to the thesis, including material culture, preservation, and theories of learning. In addressing material culture, in which scholars determine the value and meaning of objects, the researcher focused on work by Jules Prown, who used a formulaic approach to material culture, and Dick Hebdige, who took a more abstract approach looking at writings, dance, art, and all aspects of a culture to determine the value of objects. When looking at preservation, the researcher addressed Eugene Viollet-le-Duc's and John Ruskin's theories on scrape and anit-scrape

preservation as well as preservation tactics and methods employed in the museum setting. Theories of learning primarily focused on the interactive theories of discovery and constructivism, though stimulus-response and expository-didactic methods were also employed. The researcher employed all three aspects of this research, material culture, preservation, and theories of learning, in designing an interactive exhibit about Dolley Madison at the Greensboro Historical Museum.

The researcher presents case studies in Chapter III documenting sixteen museums in the U.S. and Netherlands in the areas of interactivity, materials, light and color, signage, educational theories, preservation, and circulation. Before commencing design work, the researcher visited several museums to study and document various methods used by museum staff in drawing visitors to exhibits and displaying information. These case studies helped the researcher understand first hand the pros and cons of a wide array of exhibit layouts as well as interactive and non interactive display techniques which aided in the design process.

In Chapter IV the designer discusses the methodologies behind the design process, following the exhibit design from research to conceptualization to design and finally evaluation. The researcher briefly describes the museum case studies of Chapter III as well as preservation needs for artifacts used within this design. The researcher then lays out the phases of design; schematic design, design development, design refinement, and the critique process, documenting analysis and critical feedback that occurred at each phase. A description of the data evaluation processes concludes this chapter.

The designer presents a detailed analysis of the design process in Chapter V including schematic design, design development, and design refinement, documented through text and illustrations. All three design phases conclude with critiques and evaluations, aiding in the evolution of the design. In the schematic design phase the designer developed broad initial concepts as related to Dolley Madison and the theories of learning. In the design development phase, the designer refined earlier ideas to form more concrete physical manifestations within the exhibit. At the design refinement stage the designer established a big idea, “extraordinary accomplishments, power and the party planner”, which she implemented throughout the exhibit. As part of the design project, all three phases built upon one another to culminate in the final exhibit design presented to a panel of experts. They evaluated the exhibit, both written and orally, providing the designer with physical data to document and analyze in the post design analysis section of Chapter V.

The designer explains the conclusions and summaries of the research conducted in the final chapter of this thesis. The designer documents pros and cons she noted throughout the research, design, and evaluation processes, including a focus on theories of learning and the designer’s attempt to only implement discovery and constructivist theories in this design. The designer notes fallacies in data collection, and answers the thesis question. Additionally the conclusion provides future directions for further exploration of interactive exhibits.



## **CHAPTER II**

### **MUSEUMS AND ARTIFACTS**

Museums exist to educate the public through the use of objects and artifacts, which must be preserved in order for future generations to learn from them. Though they contain very different objects and collections, historic house museums, art museums, and history museums have one thing in common: education through material culture. Material culture theory establishes the idea that objects contain value and people learn from, appreciate, and preserve these values for future generations and themselves; museums preserve artifacts and educate the public through the use of the artifacts. When presenting information to the public, museums face the dilemma of how to best preserve artifacts while also enabling the public to learn from them. The issues of what constitutes material culture, the role of museums in education, and methods and theories of preservation, all topics of concern within this research, provide relevant methods for balancing the presentation of objects and their preservation to allow a variety of methods of visitor interaction.

#### **Material Culture and Object Interpretation**

Material culture approaches help demonstrate the values objects hold as well as the information one can glean about culture, maker, and user from the study of objects. From this perspective, objects contain value regardless of approach. In serving their

visitors, museums preserve material culture for themselves and the generations to come by serving as facilities for object storage, interpretation, and preservation. This often occurs with an unbalanced approach between use and preservation as manifest in exhibits with artifacts enclosed in glass and only available to the public visually. First-hand interaction with artifacts better allows visitors to understand museum professionals' interpretations of artifacts by providing physical exploration of the artifacts or reproductions to occur. This type of interactivity within museums often exists in science centers and areas that engage children, but is underused in other museum settings such as art or history museums resulting from a need to preserve artifacts for generations to come. In order to provide a better environment for visitor learning a balance between artifact preservation and interaction needs to develop. To begin the process of exploring how to achieve this balance the researcher thought it necessary to first obtain an understanding of material culture and object interpretation

Hebdige (1979) and Prown (2000) present two main theories in material culture, an abstract interpretive approach, and an approach that relies on formal analysis. Prown defines material culture as, “the study of material to understand the culture, to discover the beliefs—the values, ideas, attitudes, and assumptions—of a particular community or society at a given time” (11). Scholars in material culture examine objects to infer deeper meaning about the individuals who created, used, or purchased items in the context of their cultures. Primarily, anthropologists and cultural historians use the theories and methods of material culture to understand the intellectual achievements that characterize a society, such as art, science, technology, and religion. These artifacts provide a

physical link to the past that “can be re-experienced, they are authentic, primary historical material available for first-hand study” (2000, 12).

Prown (1982) views objects as active evidence of the past and a means to understand cultures, particularly those that left no written record (1). Interpreting objects, however, often relies on interpreters, who subconsciously reflect their own values, beliefs, and notions onto the use and purpose of objects, a particular shortcoming of material culture approaches. Nonetheless, when there is a scarcity of written records and researchers wish to push the envelope and question currently recorded beliefs about a culture, material culture offers an excellent means to interpret the past. Prown provides a three-step approach to interpreting an object to help remove bias in the analysis. These three steps “proceed from *description*, recording the internal evidence of the object itself; to *deduction*, interpreting the interaction between the object and the perceiver; to *speculation*, framing hypotheses and questions which lead out from the object to external evidence for testing and resolution” (1982, 7). Prown follows this formula when encountering an object to determine the value and use the object contains for a culture. In his classic study of teapots, Prown’s application resulted in his speculation that several teapots metaphysically represented the breast, associated with femininity and warmth. Thus the resulting material culture inference suggests that teapots lead to a sense of warmth, comfort, and embody a womanly essence. Followed by numerous disciples, the Prownian approach extends formal analysis to a variety of objects from hat pins to entire houses, where each researcher basically follows a description, deduction, and speculation

model, with other names for the steps and sometimes an elaboration of one step (Pearce, 1989; Lubar, 1993; Brown, 2004).

While Prown focuses on encountering objects first hand, Hebdige (1979) investigates a more broad idea of culture and ways in which culture presents itself through objects by primarily focusing on subculture, which he describes as a symbolic violation of the social order (19). In other words, subculture symbolically represents a distortion of the overriding culture in any given society. In looking at several layers of what constitutes culture, Hebdige focuses on the evolution of the definition of culture, which in the words of Arnold, changes from, “the best that has been thought and said in the world” (Hebdige, 1979,6) to the study of everyday life. Culture, according to Hebdige, not solely evident in writings and teachings, exists in every aspect of life including dance, folk stories, beliefs, art, jewelry, rituals, and music. For Hebdige objects “are made to mean and mean again as ‘style’ in subculture,” (3) suggesting that objects contain multiple, shifting meanings and values through time. His study of the attire of punk culture suggests that mainstream society views punks as displaying poor hygiene, lower social status, and disruptive behavior, whereas the punks view their attire as a means of self-expression of a unique and individual style. Hebdige’s approach has not been adapted as widely as Prown’s, but provides an important alternative view considered within the field because it provides another form of investigating culture that, alongside artifacts, adds things such as art, literature, and music to the study of material culture.

Hebdige draws from the works of many scholars, including Hoggart and Barthe, to establish his view of material culture, in which he investigates all aspects of a culture including literature, arts, architecture, beliefs, and ceremonies. Hoggart views a culture through its literature and determines the meanings and values of a society based on their writings. Barthe examines a wide range of aspects of a society including theatre, literature, rituals, film, clothing, and ceremonies. Barthe “examines the normally hidden set of rules, codes and conventions through which meanings particular to specific social groups (i.e. those in power) are rendered universal and ‘given’ for the whole of society” (Hebdige, 1979, 9). These two theorists provided Hebdige with insight into varying means to understand and interpret a culture by looking at more than just objects. Hebdige combined both definitions of culture to include a society’s literature and activities of daily life into his method of material culture interpretation.

Other views of the material world suggest that people collect items because they have value, even though sometimes that value varies from person to person. Blom (2003) studies the history of collectors and collecting and documents that everyone serves as a collector in one form or another:

Every collection is a constant reminder of the very reality it has been created to stave off. The greater the value of a collection, the greater the risk of loss that it represents; the greater the will to live on, the more glaring the admission of mortality and oblivion. Objects in rows and cases, arranged along the wall or piled up on the floor, are anticipated headstones and memorials, every one of them the grave of a past desire, or of the illusion of having conquered it momentarily, of peace at last (2003, 228).

According to Blom, a collection can include works of art, thoughts, learned languages, paper cups, poetry, writing, and any range of things from objects to ideas. The most poignant part of Blom's writing occurs in the epilogue as the author recounts a one-time encounter with a man in a café in Vienna. The man confides in Blom the history of his life long addiction of adding to his extensive book collection, which he just sold. The man discovers that collecting in and of itself did not contain meaning; instead positing that the individual finds value and meaning in simple things in life such as the nicotine stained ceiling of the café, and in his case, books (2003). More simply, all objects contain value whether people realize the values or not. Value exists in all aspects of life as Blom, the man in the café, and material culturalists note. While unexpected, material culture also occurs within the realm of the art museum.

Work within art museums often presents with little interpretation, only a brief label noting artist name, date, title, and media type. Aaron Betsky (1997) documents the current trend toward recognizing and embracing material culture represented in the exhibit *Icons: Magnets of Meaning* that he curated at the San Francisco Museum of Modern Art (SFMOMA) in 1995. A pair of Levis, a tube of lipstick, a surfboard, and a BMW represent just a few of the objects displayed in the exhibit. Betsky "has considered these ubiquitous, modernist artifacts of our designed environment from conceptual, formal, and emotional perspectives, endeavoring not only to analyze the design qualities wrought by their creators but also to reveal the layers of cultural meaning with which we, as consumers, have invested them" (9). The SFMOMA exhibit delves into the material

culture present in common everyday objects of the late twentieth century and demonstrates that material culture exists in all objects.

Through both academic studies and museum exhibits, material culture aids in understanding objects in everyday life of the past, and the people who made, owned, used, and discarded them. Because the value of some objects rises to a high level of social signification, individuals and institutions preserve these cultural artifacts in private collections and public museums. Museums serve as repositories for collecting the material world, storing and preserving it for posterity and, significantly, utilizing it for purposes of education through exhibition, an often problematic challenge in the face of preservation needs.

### **Museums and Education**

Like material culture theory, scholars who write about museums inherently write of value embedded not just in objects, but also in their interpretation. William Henry Flowers said, “It is not the objects placed in a museum that constitute its value, so much as the method in which they are displayed and the use made of them for the purpose of instruction” (Conn, 1998, 23). In order to understand the values museums hold for the public, one must understand the evolution of museums in America as well as the theories of viewing, interpreting, and preserving objects.

Museums have existed for centuries though their purposes evolved through time to meet the needs of people using them. In Grecian times museums originally referred to a temple where the worship or the invocation of muses such as poetry, art, and history, occurred. Early museums in the United States formed as showcases for rare and odd

objects, sometimes fraudulent, displayed in what were commonly referred to as cabinets of curiosities. A well known purveyor of such theatrical presentations, P.T. Barnum's New York City museum existed purely for entertainment (Winchell, 1891). As America expanded west and physically acquired land, places such as Charles Peale's natural science museum served as a means to intellectually conquer the new frontier by presenting ideas accompanied by artifacts to the public for the purpose of education (Brigham, 1995). Thomas Jefferson requested Peale display artifacts acquired by Lewis and Clark during their expedition to the Pacific Ocean as a means to assert claim over that land, while further asserting the museums role as a direct link to the public.

Stephen Conn (1998) documents the history of museums in America, which begins with the idea, held by most early nineteenth century Americans, that objects contain as much knowledge and meaning as texts. Museums hold, study, interpret, and display objects with the primary intention of educating the public. Following enlightenment thinking of the eighteenth century, American museum staff sought to educate by classifying and grouping objects on display in long rows of glass cases. Visitors learned from objects first by understanding the object individually and then observing relationships to surrounding objects. In observing relationships, people noticed differences and similarities, patterns, development, the evolution of artifacts, styles in art, and how individual parts fit into the whole such as timelines in history. Although museums still use this method of interpretation today, armed with the knowledge that visitors learn through a diversity of styles, methods for interpretation within museums have changed significantly, increasing the breadth of United States museums and their



collections. This diversification of type of institution and collection approach found roots in the late nineteenth century.

In 1888, George Brown Goode, assistant Secretary of the Smithsonian, delivered a speech to the New American Historical Association stating, “the museum of the past must be set aside, reconstructed, transformed from a cemetery of brick-a-brac into a nursery of living thoughts” (Conn, 20). The focus of museum collections shifted from assortments of oddities and artifacts donated primarily by wealthy individuals to a more systematic organized set of collections, which varies depending on museum type.

Science museums typically organize artifacts in rows of glass cases organized by *philo* and *genus*; art museums group art by style or artist; history museums typically organize exhibits in timelines; and some museums immerse visitors in environments surrounding artifacts. In the last twenty years, the structure of museum exhibits has shifted from a scientific, systematic organization to one that actively involves and engages the visitor. The Philadelphia Museum of Art presents its artifacts in a variety of settings and time periods by introducing building elements from European cathedrals, a pillared temple hall from India, as well as a reception hall from the Palace of Duke Zhao. This approach presents the artifacts in more of the natural context in which they belong and provides visitors with the opportunity to more easily understand the origin and history of the artifact. The North Carolina Museum of Art arranges its collections primarily on region and time period; oceanic, American, African, European, Ancient, Ancient American, Judaic, and Modern. This organization scheme allows visitors to

visually compare art from similar region or classification and note similarities and differences.

As museums evolved, their staffs developed different types and methods of interpretation to match the range of institutions. Interpretation deciphers a value for the object and provides the visitor with a method to understand and hopefully learn from that object. Methods used to interpret objects and events influence whether or not a visitor learns from the object as well as determine what a visitor learns. According to Dubin (1999), Linenthal (2001), and Carr (2003), how a museum interprets the subject matter they display can evoke strong responses from the public due to individual attachment and sense of ownership of the event or object on display, and cultural representation museums purport to tell. As noted by Dubin, the interpretations museums present to the public can spark controversy and result in the closing or alteration of the original exhibit. Though controversy hurts an exhibit by leading to its closing or dilution of subject matter; the positive effects cause more people to gain interest in the subject and thus a wider populace becomes aware of the topic presented. Controversy as a whole tends to spark emotions and bring about public involvement, drawing attention to museums that on the typically may be overlooked and ignored.

Dubin addresses the importance of interpretation in museums by examining several controversial museum exhibits in the 1990's. The exhibit of the plane, Enola Gay, which dropped the atomic bomb on Hiroshima and Nagasaki, Japan in 1945, sparked controversy among several groups around the world. These groups raised questions that included what content to display, how to title the exhibit, and what view to

take on the atomic bomb. Groups and individuals from veteran organizations to Japanese Americans expressed their opinions on the matter causing the exhibit to be delayed and edited, resulting in a neutral and very minimal exhibit.

Similar responses came with the announcement of designing a Holocaust Museum on the National Mall in Washington, DC. Linenthal (2001) describes the meetings and decision making process that occurred to make the museum a reality. With so many living people with direct memories and connections to the Holocaust, a difficult and controversial task lay ahead in how and what to interpret. Controversy existed over many topics including would piles of hair from concentration camp victims be too gruesome to present to the public, and how to balance getting visitors to understand the horror of the Holocaust without traumatizing or battering them with horrific images and artifacts. One of the biggest controversies surrounded the question, “Why locate the museum in America when the Holocaust occurred in Europe”. Despite fifteen years of debate over each detail, the museum successfully opened in 1993 and welcomes visitors sometimes at a rate of 10,000 a day, which serves as an example that compromises reached over controversial issues can result in powerful and informative exhibits. In addition to decisions regarding the display and interpretation of subject matter, museum personnel must also decide how to use this material to educate the public. Regardless of the popularity and effectiveness of any exhibit, all museums follow educational theories of learning when organizing their exhibits. However, museum designers and interpreters do not use one pure theory but tend to borrow on a variety of approaches in a given exhibit.

## **Theories of Learning**

Hein and Alexander (1998) discuss four theories of learning: expository-didactic, stimulus-response, discovery, and constructivism. People learn in different ways and no one way is right or wrong. Museum employees use these theories, often in combination, when developing exhibits. Traditional museums tend to apply expository-didactic and stimulus-response theories, however recent research shows a direct link to improved learning from exhibits that display traits of discovery and constructivist learning theories, the more interactive of the four. All four theories of learning appear in the museum setting typically in combination with one another. To understand how museum exhibit designers employ these theories, it is imperative to know the theories themselves.

### *Expository-didactic*

The first theory of learning, expository-didactic, presents information in a rational, incremental sequence. The theory begins with a body of knowledge that must be mastered, carried out through memorization, and reinforced with repetition, an approved approach that many school systems utilize. For example, students typically memorize and repeat the multiplication tables or phrases and words in a foreign language.

Museums generally employ expository-didactic learning by arranging exhibits with a defined beginning and end following an intended chronology by which visitors view objects. Labels and panel texts state what visitors should learn with information presented in small incremental steps, usually arranged from simple to complex. Often the information in one display case builds off the information in the preceding case. Following these guidelines, natural history museums tend to display objects according to

genus and species, while history museums present information chronologically, and art museums present objects by style, chronology, or national origin. The Holocaust Museum in Washington, DC demonstrates a successful use of expository-didactic arrangement, though this is not the only method employed by the designers. The exhibit presents to the visitor chronologically, and through a hierarchy of exhibit labels allows visitors to easily read as much or as little as they desire.



*Figure 2.1: Images from the Jug Town Pottery Exhibit at the Greensboro Historical Museum displaying information on the history of Jug Town in a chronological order*

Benefits of this approach include the ability to easily organize information for visitors, and present historical events in a chronological fashion. Challenges of this approach include effectively educating the majority of visitors about the exhibit since expository-didactic exhibits rely heavily on text and controlled traffic flow through the exhibit. Falk (1992) determined that “all visitors read some labels but no visitor reads all labels” (71). After watching several visitors in front of exhibits, Falk concluded that more than 90 percent of visitors did not read the labels at all and only referred to labels when they were confused or had unanswerable questions about the exhibit. Exhibits

designed to rely on labels to educate the public lose effectiveness if less than 10 percent of visitors read them.

### *Stimulus-response*

Stimulus-response or behaviorism represents a second theory of learning that emphasizes method and rewards appropriate behavior or responses. Established methods of learning, tested and measured systematically independent of subject matter, represent hierarchies of learning, and suggest that man is nothing more than a machine who responds to conditioning (Hein, 1998). Thus like Pavlov's dog that salivates when the bell rings, behavior can be controlled based on the type of reward or punishment received. In the case of a classroom, teachers influence the behavior of their students by rewarding correct work with the grade of an A.



*Figure 2.2: The National Archives Experience in Washington, D.C. This exhibit allows visitors to slide a screen (shown in the red circle) to the left or right activating a video related to the file the screen is positioned beneath.*

Museums use stimulus-response and behaviorism to reinforce targeted concepts by offering rewards for visitors who obtain the correct answer. An interactive exhibit at

Exploris in Raleigh utilizes a computer screen concealed in the mirror that instructs a visitor to find the described object in the exhibit. When the visitor waves a pen with an infrared sensor over the correct barcode posted under a certain object they receive a reward in the form of onscreen text that says, "Correct." However if they select an incorrect barcode, the screen displays the words "Try Again." Stimulus-response presents challenges because not all people feel rewarded in the same way and visitors can become frustrated when they do not receive a reward. Additionally, visitors may not actually learn from this type of exhibit and may only utilize the process of elimination to find the correct answer and then move on to the next exhibit or question. Conversely, museum visitors benefit from this system of positive reinforcement by quickly seeing what answer choices do and do not work.

### *Discovery*

John Dewey promoted the third theory of learning, discovery (1966), in extensive research on the effectiveness of learning styles and through subscription to the school of Pragmatism. Within this system, Dewey advocated a focus on utility and practicality as vital components of truth, with emphasis on problem solving and critical thinking skills rather than on the memorization of facts and lessons. Discovery theory suggests that engaging learners in activity achieves specific, desired educational outcomes, and that exposure to sufficient data results in acquired knowledge. Putting discovery theory into practice, Dewey and his wife, Alice, ran a laboratory at the University of Chicago to help children to master early concepts of chemistry, biology, and physics by investigating the natural processes that occurred when cooking breakfast, which they prepared daily.

Museums employ discovery theory by allowing visitors to learn by doing. Labels and panel texts engage visitors by presenting questions instead of stating facts, and visitors engage objects by touching, smelling, holding, and utilizing more than eyesight to learn. Sometimes visitors replicate famous science experiments or role-play simulated historical events. One exhibit panel at Exploris (Figure 2.3) in Raleigh asks the visitor, “How much water does a person need in one day”. The visitor then turns a crank and instantly hears water flowing and watches as the white buckets light up as they visually appear to fill with water. Another sign beside the buckets lists how many buckets of water meet the water needs for a family of four in one day.



**Figure 2.3:** An exhibit at Exploris Museum shows discovery learning. In this example, a question is asked, the visitor engages the interactive, and the result is seen as buckets of “water” light-up.

Many difficulties arise when designing interactive exhibits that appeal to both adults and children. Often adults have been conditioned not to touch items within a museum and are less likely to attempt interaction (Falk, 1992). Sometimes, visitors only engage with computers and video exhibits in place of the actual object (Adams, 2004,



160), which benefits the visitor when the museum is crowded and access to the object is limited. The design of interactive components can cause congestion on paths and may result in an experience that takes more time than visitors want to invest. Despite the challenges present, visitors retain information on a long-term (four to eight months) basis compared to non interactive exhibits (Falk, 2004). Other advantages of interactive exhibits include visitors actively engaged in learning, a willingness to wait to experience the interactive, and interactive exhibits engage groups more than signage alone.

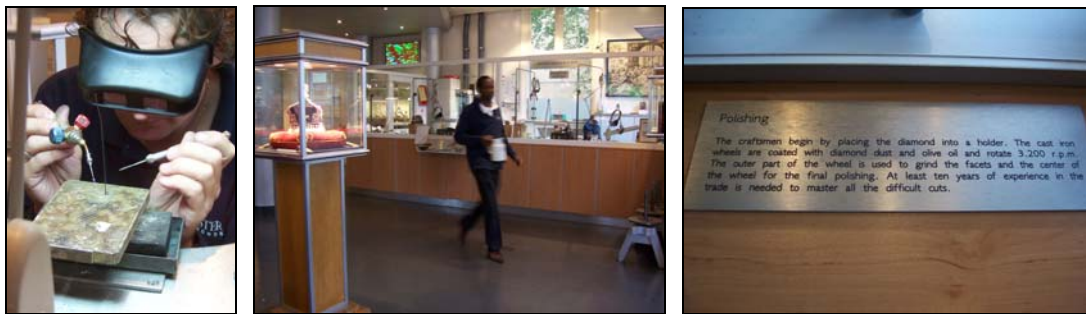
### *Constructivism*

Jean Piaget (1978) founded the fourth theory of learning, constructivism, which holds that learning requires active participation. Under this approach, visitors engage in a total mind and body experience, not by achieving an external standard of truth, but through experience and exploration by the individual. In other words, visitors gain knowledge not by being told something is true, but rather by experiencing that it is true. Constructivism best utilizes the Socratic method of teaching, in which the student and teacher engage in active dialogue, as opposed to the teacher bestowing infinite wisdom on the student.

Constructivism within the museum utilizes knowledge and experiences that visitors bring with them, emphasizing both exploration and question asking. Exhibits have no set path for visitors to follow; labels and panel texts present a range of viewpoints and often pose open-ended questions. One advantage of this approach suggests that visitors retain more knowledge when encouraged to seek out information on their own instead of asking someone for the answer. However, museums remain

uncertain that by asking questions, visitors discover correct answers on their own, which presents a challenge for exhibit designers and museum educators.

The Coster Diamond factory in Amsterdam, Netherlands provides visitors with an interactive opportunity to discover the process of refining diamonds. Photos along the wall around the entire room show how to obtain diamonds through mining as well as details of the refining process leading to the finished product. Tour guides provide a brief auditory explanation of the process and respond to questions. The space has an open layout that provides visitors with the ability to choose what they want to focus on and the order in which they learn (Figure 2.4). Plaques near each work station describe the basics of the step in the refining process each worker completes. The Coster Diamond factory provides a very good opportunity for visitors to learn through constructivism.



**Figure 2.4:** A jeweler at Coster Diamonds welds jewelry together (L), the open space allows visitors to easily navigate their own path through the space (Center), and a plaque in front of a work station describes the process of polishing diamonds (R).

Museums employ all theories of learning within their exhibits, though some museums focus more on one theory than the other three. These theories affect the design of museum exhibits. Typical designs range from the expository-didactic influenced aisles and rows that prevent the visitor from making many independent navigation choices; to

the inclusion of open spaces that allow visitors to discover answers and information on their own. In addition to learning styles, other factors, such as preservation of objects, influence the design of a museum alongside the level of interaction patrons have with artifacts, activities that tie directly to the level of preservation the objects receive. Within the museum field artifact preservation remains a high priority for curators and other museum professionals due to artifacts drawing crowds and providing a physical connection to the topics presented. Preservation remains important to the museum field as it allows museums to display artifacts for years to come.

### **Preservation**

Within museums, preservation often takes precedence over the ability of a visitor to learn from the artifact through interaction. Display cases typically contain artifacts engaged by visitors only on a visual level, thus inhibiting the ability of a visitor to learn using the discovery and constructivism methods of learning. While the importance of object preservation exists to include a balance of both scrapist and antiscrapist approaches, the importance of engagement of the object through touch and other senses should not be minimized. Simply, a more suitable middle ground should be reached.

Although professionals approach numerous avenues to preservation, many can trace back to Viollet-le-Duc (1959) and John Ruskin (1989), who characterize the two main approaches: scrape and anti-scrape. Scrapists often remove and replace or repair features of a building with a reduced sensitivity of matching the original materials or methods used to construct the building. Anti-scrapists take a minimalist approach and attempt to make small repairs before removing or replacing anything in a building.

Elements too deteriorated to repair, when approached by an anti-scrapist, merit study, removal, and replacement with an exact match or as close to one as possible.

Viollet-le-Duc, a forefather in historic preservation beginning in the early 1830's, restored and preserved many buildings in Europe including Notre Dame, Sainte-Chappell, Saint Denis, and the city of Carcassonne. Viollet-le-Duc (1959), while instrumental in saving many of Europe's treasured buildings, did so in a manner that often involved the removal or replacement of original features, materials, and architectural designs by reinterpreting the original design intentions. His scrapist method called for the removal of old or damaged elements and replacement with new elements, not necessarily congruent with the originals.

Reactions to Viollet-le-Duc's work vary from strong affinity to strong dislike, verging on hatred, including the painter, Auguste Renoir, who decided not to move into an apartment upon discovering that its location was near the street named for Viollet-le-Duc (Russell, 1988). Dislike for Viollet-le-Duc exists because he primarily worked on buildings viewed as monuments of French culture, which many feel he vandalized. Throughout the last 180 years, a range of people from the general public to well known artists such as Renoir, disliked the alterations he made because they view them as changes that tampered with the original architects design and intent, however, a 1988 exhibit at the Grey Art Gallery in New York titled, "Viollet-le-Duc: Architect, Artist, Master of Historic Preservation," presented the architect as a patient designer with an eye for detail. It also helped people realize that without his attention, many of historic European buildings might not exist today. The view of Viollet-le-Duc as reckless and

self-serving has softened with knowledge that he intended the alterations to enhance and improve the existing structures (Russell, 1988). Anti-scrape within the museum presents as artifacts used only for display to avoid deterioration. To avoid sacrificing an artifact, museum curators use replicas which, depending on the equality of the replica and the original artifact, may or may not elicit similar sensations and reactions within a visitor.

Representing the anti-scrapists in his belief that repairs to buildings should be minimal and only out of necessity to maintain building functionality, Ruskin (1989) presents the idea that a sacred building has weathered time, the life and death of men, and captured their essences in its walls, changes that should be valued. Ruskin appreciates buildings for their form and history, not solely their functionality, so that a decaying barn might be considered a work of art that needs no repairs. Ruskin pushes further, suggesting that buildings tell their own histories as each new generation lives in and changes these structures to suit their needs. Ruskin reminds one that each new generation needs to consider the changes they make with care, and be mindful of the design intent of the preceding owners.

Summerson (1949) states that Ruskin's idea was that "new buildings must be built to last indefinitely and must not depend for their impressiveness on anything that is perishable... [as]... they will acquire the marks of age" that contain meaning, which in the words of Ruskin, "nothing else can replace and which it is our wisdom to consult and to desire.'" (Summerson, 1949, 229). According to Ruskin, buildings should be built to last and allowed to develop their own stories and histories as each generation lives in and encounters them. Applications of Ruskin's theory in the museum setting results in

objects, easily compared to buildings when one considers buildings large scale artifacts, that change as time progresses; however, moderate preservation may still be taken into consideration to ensure the maintenance of objects.

People preserve objects because they serve as representations of values, beliefs, and history, subjects that material culturists determine through abstract analytical approaches (Hebdige, 1979), and through formal investigations to deduce the value of objects (Prown, 2000). Within museum exhibits, the display of objects aid in educating the public through and about culture through artifacts, in term informed by theories of learning. An underlying assumption of this research suggests that visitors learn best through the theories of discovery (Dewey, 1966) and constructivism (Piaget, 1978), manifest in open exhibit floor plans, questions posed on exhibit labels, and exhibit arrangements that provide ready access for visitors to interact with objects with multiple senses (visual, tactile, auditory), thus resulting in multiple opportunities for visitors to discover answers themselves (Adams, 2004).

Several museums address conservation issues as they relate to and affect the museum environment and collections through leaflets and publications that address optimal lighting, temperature, and humidity levels for artifact preservation. Many articles discuss preservation concerns of specific types of objects such as paper, metal, ceramics, and wood since each materials environmental tolerances vary (Bachmann, 1992, Craddock, 1992, Giuntini, 1992). The importance of object preservation exists to include scrapist (Viollet-le-Duc, 1959) and antiscrapist (Ruskin, 1989) approaches, however no writing on object preservation and exhibit design balances the need for learning and

preservation side-by-side. To better understand current methods of incorporating preservation and interaction in the museum setting the researcher visited sixteen museums in the U.S. and Netherlands, documenting levels of interaction and methods of presenting information to visitors.

## CHAPTER III

### OBSERVATIONS OF INTERACTION IN U.S. AND NETHERLANDS MUSEUMS

When undertaking research on interactivity and preservation within museums an important step to consider is an investigation to establish an understanding of existing practices. The researcher visited sixteen museums within the United States and the Netherlands and made comparable observations based on similar criteria for each museum including documentation of a variety of interactive elements, preservation practices, and methods of interpretation. The locations and museums picked provide a broad view of American and European exhibition practices. The range of museums covered in this study includes topics in; history, art, historic house, specialty, and science.

Part of the research process included visiting museums and documenting interactive exhibits and theories of learning present. This early research served as precedent for the design process. Throughout all phases of design - schematic design, design development, and design refinement - the designer kept educational theories in mind. The designer considered concepts such as open floor plans, hands-on exhibits, written text that posed questions, and exhibits responding to visitor's engagement through each phase of the design process.

#### Virginia

##### *Blue Ridge Institute, Ferrum, VA*

*Interactivity:* Visitors can touch artifacts due to minimal barriers present, though this is not encouraged or suggested by signage within the museum.

*Materials, light, and color:* The color choice of signage seems to reflect that represented in the natural rusty colors of the distillery containers and the environment in which most stills were located, the woods. The use of logs as minimal barriers to separate visitors



from the artifacts on display reinforces this sense of setting.

*Signage:* Basic panels of brown with white text describe the history of moonshine and the process of making the drink. Images mixed in with the text panels reinforce the process described. Smaller text labels posted beside each image relate the date and location of the image.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* dominant theory used in the exhibit seen through linear presentation of information on the moonshine process.

*Discovery:* some what by the open circulation format, and minimal barriers.

*Constructivist:* N/A

*Preservation:* Smaller, more delicate artifacts are presented in glass cases. The researcher assumed but was not sure if the open artifacts on display were reproductions or actual artifacts. They were exposed to the environment of the museum.

*Circulation:* Fairly open exhibit, can be navigated in a circular manner.



**Figure 3.1:** Overall view of display showing differences in signage



**Figure 3.2:** Open display of typical distillery with log barrier

*Shenandoah Valley Museum, Winchester, VA*

*Interactivity:* Purely visual interaction. All of the scale miniature houses on display are in glass cases, though the cases are placed at a height that promotes visitors visual engagement (they sit with their bases roughly 2.5 feet above ground level).

*Materials, light, color:* Multiple materials and colors are present in the artifacts, thus the neutral colors of the surrounding room help emphasize the artifacts. Lighting is bright and aids in the visitors ability to see the details within each miniature.

*Signage:* Small text labels on each display case have detail images of items within the miniatures such as lamps, furniture, or portraits. These labels provide further information about these details and their significance within the miniature house.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* N/A

*Discovery:* Used very minimally, visitors are allowed to choose which houses they examine due to the circular layout of the exhibit.

*Constructivist:* A video screen placed near the ceiling above some of the display cases, has a continuously playing video with a man telling the history of the miniatures and the man who designed them.

*Preservation:* The artifacts are well preserved in their glass cases and are kept safe from human and environmental changes. One cannot tell what kind of lighting is used and what level of preservation it provides, but the artifacts are constantly exposed to light.

*Circulation:* The exhibit has a circular layout with one miniature house displayed in the center of the room and all other miniatures in surrounding cases.



*Figure 3.3: Overall view of miniatures exhibit showing central exhibit case*



*Figure 3.4: View of visitor peering into miniature on display*



*Figure 3.5: More detailed view of miniature*

*Museum of Frontier Culture, Staunton, VA*

*Interactivity:* First person interaction abounds at this site as visitors tour period style dwellings and interact with costumed interpreters. The entire site provides interactive elements demonstrating daily life on European immigrant farms in America.

*Materials, light, color:* Materials consist predominantly of woods, a few metals, and clay mixtures seen in house, fence and kitchen construction. Most colors are neutral earth tones with an occasional white wash on the buildings.

*Signage:* There was no signage except that found at the visitor's center and seen in brochures and pamphlets passed out to visitors upon arrival.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* N/A

*Discovery:* Visitors are free to discover the farms to a full or minimal extent as they see fit visually, however physical interaction with various articles around the houses seems discouraged.

*Constructivist:* Visitors are encouraged to ask questions and listen as guides describe the daily activities of most families living in homes and working on farms like these. Museum staff wear period attire and clean, cook, and farm with methods similar to those used for centuries before the industrial revolution.

*Preservation:* All houses on the property are original structures relocated to the museum site in Virginia in the 1980's. Constant upkeep is needed to keep the houses in a state such that visitors and staff can use them and to preserve the original historic structures. The upkeep is done on a seasonal basis to simulate the cycle of upkeep from the period when these homes would have been in use.

*Circulation:* The entire site is set up with each of the four farms; Irish, German, English, and American, and an iron forge off of a circular path that starts and ends at the visitor's center.



*Figure 3.6: Typical English farm home*



*Figure 3.7: Typical jars used for storage of food goods on display in one of the homes*



*Figure 3.8: Blacksmith creating nails*



*Pope-Leighey House, Alexandria, VA*

*Interactivity:* Visitors can walk through and around the house, get a feel for the size and scale of the rooms, and sit in some replica Frank Lloyd Wright chairs. The knowledgeable docent provides further interaction as visitors can ask questions and get specific answers. Doors and cabinets can be opened and explored at will.

*Materials, light, color:* The space is full of natural light, uses ventilation through open windows to cool the space, has radiant heat in the floors as well as fireplaces for warmth, and the materials are dominantly natural woods and brick.

*Signage:* no signage exists in this house

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* The docent leads visitors through the house in a linear manner starting with explanation of the public spaces and general information on the architect, Frank Lloyd Wright. He then guides visitors through the private spaces and allows a closer, more intimate investigation of the rooms.

*Discovery:* Visitors are allowed to open doors and drawers to explore and experience the space on their own, though most things the docents open to reduce damage to the house.

*Constructivist:* Visitors can ask questions of the docents and get answers ranging from information on the owners of the house, to details about Frank Lloyd Wright. There is a stand on display with an example showing the cross section of how the walls are constructed, and visitors can touch this and visually see and understand the construction of the house.

*Preservation:* The house was moved from its original location as a means to protect it, and the house is protected and cared for by the National Trust for Historic Preservation.

*Circulation:* Directed and controlled by a docent. Visitors begin outside walking up the

drive to the front door, then are led into the public spaces, through the private rooms, and finally are allowed to walk around the exterior.



*Figure 3.9: View of Pope-Leighey house from driveway*



*Figure 3.10: Detail of Frank Lloyd Wrights ornamentation on windows*



*Figure 3.11: East exterior view of Pope-Leighey house*

## **North Carolina**

### *St. Philips Church, Old Salem, NC*

*Interactivity:* Multiple interactives in this exhibit include; the church building itself which is a reproduction of the original black church in Salem, a video with accompanying map that lights up indicating areas where slaves came from before arriving in the U.S. Other interactive elements include listening stations that allow visitors to hear an interpretation of the daily activities of black members of Old Salem's community.

*Materials, light, color:* The design of the space is visually open with glass partitions dividing the space and the materials are a mixture predominately including glass, metals, and wood. The color scheme is strongly natural and earth toned with some vibrant colors represented in images painted on the wall right below the ceiling.

*Signage:* The signage is very minimal and blends in with the exhibit. The labels are small and appear as appliqués on the glass partitions as well as small labels around the room identifying artifacts on display.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* Educational ideas build on initial concepts acquired from the introductory video and artifacts first encountered.

*Discovery:* The auditory interactives allow visitors to have a sense of first hand correspondence with members of St. Philips congregation. Artistic representations of each slave create a sense of personality for each person represented in the exhibit.

*Constructivist:* The volunteer in the building provides answers to questions about Old Salem or St. Philips Church.

*Preservation:* All artifacts such as headstones of congregation members are well preserved below each artistic representation of that person in glass cases. Visitors can read the tombstones if they are still legible and do not need to touch them in order to



understand their significance.

*Circulation:* The exhibit is laid out in a linear manner with visitors having the ability to see what's ahead or behind them through the glass partitions that divide the small space.



**Figure 3.12:** Exterior view of St. Phillips Church



**Figure 3.13:** Interior view of glass wall partitions and exhibits within



**Figure 3.14:** Tombstone with artistic representation of the deceased

*Toy Museum, Old Salem, NC*

*Interactivity:* Most exhibits present in closed glass cases for visitors to look but not touch due to the delicate nature of the objects presented. A video shows a trained professional interacting with several toys in the exhibit as well as providing commentary on the toys shown.

*Materials, light, color:* Lighting overall is dim to protect the toys on display. The doll houses in the exhibit use fiber optic lights, which provide a safer way to light artifacts.

*Signage:* The signage did not stand out. There were no general signs directing you through the exhibit, only labels for each artifact describing briefly what is shown.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* N/A

*Discovery:* One artifact on display, an antique doll, provides visitors an opportunity for interaction. The doll is in a glass fronted case with a black curtain in front of the glass. Visitors read a sign that instructs them to pull a cord that draws the curtain open and allows them to view the doll. The curtain automatically draws closed when visitors release the cord, thus protecting the doll from damaging light.

*Constructivist:* This theory is evident through the video that asks questions and then shows the answer as a conservator interacts with the toys; however visitors cannot seek out answers to questions different than those shown in the video.

*Preservation:* Preservation concerns are evident in the low lighting, use of LED's, and that all artifacts are kept in glass cases.

*Circulation:* Objects are organized by type for example all dollhouses and circus themed toys are grouped together. The exhibit has an overall circulation scheme of aisles on the ground floor and then linear in the back room and second floor where artifacts in these two areas are lined on either side of the walls.



*Figure 3.15: Video showing interaction with several toys in the exhibit*



*Figure 3.16: Example of well preserved fabric doll seen when visitors pull open the curtain*



*Figure 3.17: Doll display case with closed curtain*

*Exploris, Raleigh, NC*

*Interactivity:* Interactive exhibits abound in this museum as every exhibit has one or more interactive elements.

*Materials, light, color:* Lots of windows throughout the building bring an abundance of natural light into the exhibit spaces. Colors through the space are vibrant and cover the entire range of the rainbow. There is a large use of wood in the exhibits and some metal as well as several plastics.

*Signage:* There are multiple signs throughout the exhibit, bordering on too many signs. Signage ranges from large signs that provide a general overview of each exhibit as well as smaller signs that ask questions and provide hints at how to reach the answer. There appears to be no easily identifiable hierarchy to the signage.

*Educational Theories:*

*Stimulus-response:* This is seen in exhibits such as the bathroom mirror exhibit where visitors read questions and select their answer using a laser wand to swipe barcodes below objects around the bathroom sink. A correct or incorrect message appears digitally on the mirror.

*Expository-didactic:* N/A

*Discovery:* The entire museum is open and allows visitors to navigate through the exhibits at free will. All exhibits are interactive and allow visitors to ask questions and seek out the answers themselves, though some are more complex than others.

*Constructivist:* This theory is found in the water interactive where visitors are asked how much water does a family use in one day. They can then turn a handle and crank water shown as light into buckets nearby. The buckets light up as they are filled and the visitor gets an understanding of how much energy goes into making the amount of water used by one family in a day.

*Preservation:* Not much preservation is used here as all exhibits allow for physical



interaction and seem more focused on learning ideas than on showcasing artifacts.

*Circulation:* Rather haphazard. Visitors have free will to navigate the museum as they like, which is promoted by the open layout of the exhibits displayed on two floors.



**Figure 3.18:** Weaving interactive allows visitors to experiment with different weaving techniques



**Figure 3.19:** Open and close drawers reveal answers to questions posed on drawer lids



**Figure 3.20:** Open layout allows visitors to decide which path to choose

*North Carolina Museum of History, Raleigh, NC*

*Interactivity:* Focusing on the North Carolina Sports Hall of Fame exhibit, the exhibit has interactives as listening stations for visitors to hear about NC sports. The spoken text for this is typed up on laminated sheets for deaf visitors to access the information as well.

*Materials, light, color:* Lighting in the exhibit overall is dim with lights accenting focal points. Materials consist largely of fabrics seen in artifacts and hanging banners. Colors are vivid and vary as the teams represented all have a wide array of colors in their uniforms. The colors in the exhibit are neutral and unobtrusive, which allows the artifacts to stand out. Plenty of room for future NC athletes to add their memorabilia remains and serves as an indication that visitors should return to see what might be added next.

*Signage:* Labels describe individual artifacts. Large banners hang from the ceiling showcasing headshots and names of sports greats in North Carolina. The signage does not stand out, instead it blends in and allows the artifacts and sports paraphernalia to impress the visitor. All signs face towards visitors if they follow the exhibit path from start to finish. If they navigate through the exhibit backwards, they must turn around to read many signs.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* Presented in a linear manner, all information is grouped according to sport genre. This makes it easy to link images of sportsmen with facts about their sports.

*Discovery:* Auditory listening stations provide visitors with an opportunity to hear a description of sports played in NC. Hearing sounds of the game and commentary on the sports adds a more personal dimension to the exhibit.

*Constructivist:* N/A

*Preservation:* Railings and glass exhibit cases serve as physical barriers keeping visitors

away from delicate artifacts, which include several jerseys and various sports apparel as well as a race car. Low interior and zero exterior lighting within the space reduce damaging effects to artifacts.

*Circulation:* Linear circulation allows visitors to follow a path of ramps and walkways through the exhibit. There is a clear entrance and exit for this exhibit.



**Figure 3.21:** Banners depicting famous sports players in North Carolina hang from the ceiling



**Figure 3.22:** Interactive display allows visitors to hear sports history and the hearing impaired can read the same history on laminated cards stored below

## **Pennsylvania**

### *Philadelphia Museum of Art, Philadelphia, PA*

*Interactivity:* The museum as a whole is an immersive environment that allows visitors to engage authentic structures visually and in some cases physically. Focusing on the Asian wing, the exhibit space recreates a tea hut and temple of the attainment of happiness from Japan both which are placed in recreated settings from Japan. The overall presentation succeeds however it would be more interactive if visitors could enter the buildings and walk through them. The museum accommodates visitors' inability to enter the buildings by providing laminated sheets with floor plans and brief descriptions of each room. However these sheets do not have images of the interior spaces so though a visitor will be familiar with the use of the room, the details of the space are inaccessible. These sheets are located beside the path, in front of each building, though they are easily overlooked. Each panel of text has a corresponding number for the audio tour.

*Materials, light, color:* Lighting in the room is very bright and appears to be lit from filtered sunlight through glass panels on the ceiling. The materials consist of natural bamboo, rocks, stone, terracotta, and wood. The colors remain neutral and earth toned.

*Signage:* Brief descriptions of the buildings found on plaques provide basic information on building use and function. Supplementary laminated text panels roughly 11"x17" provide more detailed information with floor plans.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* The information presented on the cards and plaques is repeated in the video with some additional information provided.

*Discovery:* A user activated video screen seemingly hidden provides a visual and auditory experience about tea houses and their use. A lack of headphones allows the auditory information to fill the room and reach all people present.



*Constructivist:* N/A

*Preservation:* Filtering the sunlight aids in preserving the buildings from fading, while lack of use and controlled air and temperature settings minimalize wear and tear on the buildings.

*Circulation:* Visitors circulate into the space and around two sides of the structures before turning around and back tracking to leave. This allows visitors to see the buildings from two different approaches.



**Figure 3.23:** A visitor reads text describing the tea house while a fence keeps them away from the building



**Figure 3.24:** Overview of walkway through exhibit



**Figure 3.25:** Temple of attainment, few physical barriers keep visitors out

## Netherlands

### *Rembrandt House Museum, Amsterdam*

*Interactivity:* While most interaction occurs visually, visitors actually get to tour the house as long as they want within open hours, and at their own pace. Visitors experience the sounds, smells (though most likely not similar to Rembrandt's day), temperature, and lighting changes of the house themselves. Docents periodically provide interactive sessions on print making as well as provide additional information on the rooms within the house and answer questions.

*Materials, light, color:* The color scheme is dominantly neutral and earthy. The house has mostly wood floors with a few rugs in main gathering rooms. Colors such as deep burgundy, green, and blue can be found in fabrics draping the bed, furniture, and of course in Rembrandt's paintings. Lighting is sparse as the day the researcher visited the home it was overcast and minimal light shone through the windows. The modern addition of electric lighting aids in illuminating dark areas such as the staircase. The majority of lighting comes through the windows creating an ambience similar to that Rembrandt would have experienced.

*Signage:* Minimal signage allows visitors to see the house as a house, not a museum. Some laminated handouts available in various languages on each floor provide additional information about the rooms on that floor and call out a few important artifacts within those rooms. It would have been helpful for there to be a reference listing all the artifacts and a brief description of their function, meaning, or material composition.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* The sequential informational video available to visitors at the beginning of the tour in two languages, English and Dutch, provides basic information about history in the 1600's, Rembrandt, painting, and the house.

*Discovery:* Visitors are free to explore Rembrandt's former house as they see fit. All artifacts with the exception of items in his former studio are out in the open with no ropes or boundaries keeping visitors away, however most visitors respect the artifacts and don't touch them.

*Constructivist:* N/A

*Preservation:* Evident in the studio area where all artifacts and half of the room are blocked off with glass barriers to keep visitors physically away from the delicate artifacts used in many of Rembrandt's paintings.

*Circulation:* A haphazard linear pattern that begins at the basement of the home, goes up three floors, and then goes into the adjoining building, which serves as a gallery, down three floors and into a gift shop.



**Figure 3.26:** Facade of Rembrandt House



**Figure 3.27:** View of the kitchen in the Rembrandt House

*Coster Diamonds, Amsterdam*

*Interactivity:* Most interaction occurred visually though there was also some auditory interaction through the option tour guide available in many languages.

*Materials, light, color:* Aside from the multiple colors seen shimmering in the numerous diamonds, the majority of the room had a clean look to it with shades of white throughout the space. Materials encountered include glass, wood, and metal found at each display case or area around the room where diamonds are refined and set.

*Signage:* Small metal labels placed on the front of each workspace provide information on the process being performed. Several large text panels around the room describe the location of the world's diamond mines and facts and history of the process of diamond mining.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* Each station presents information that show the process of diamond refinement in a linear order from cutting and polishing to setting.

*Discovery:* N/A

*Constructivist:* Visitors can ask questions from the workers and guides about the diamond refining process and diamonds in general.

*Preservation:* There is one artifact on display in an exhibit case that looks to be well preserved.

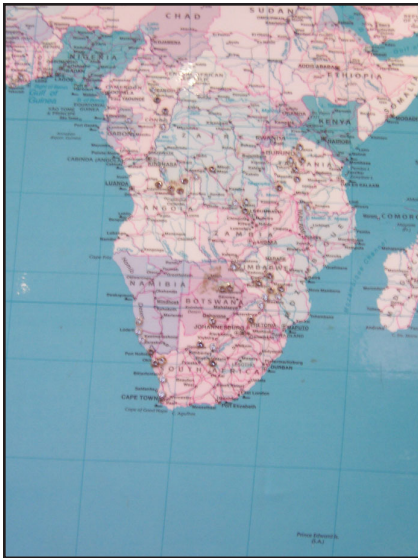
*Circulation:* Visitors can choose which stations they visit and the order they visit them as a result of the open floor plan.



*Figure 3.28: Artisan mounting a diamond in a setting*



*Figure 3.29: A display case holds a crown and jewelry in front of one of three long workstations*



*Figure 3.30: Map detailing where the majority of diamonds are mined*



*Anne Frank House, Amsterdam*

*Interactivity:* Visitors interact with the entire house by walking through it. Most of the rooms are barren and open. Videos and artifacts placed throughout the house show interviews with people that aided the Franks during hiding as well as narrate the trials of living in the annex for over two years.

*Materials, light, color:* Mostly neutral colors throughout the house. The rooms appear to need repair. Wallpaper and paint colors are dull and seem locked in the time frame of the 1940's. The majority of lighting within the space comes through windows, which do not appear to have any UV filters on them, though it was not apparent whether or not they have used UV protected glass.

*Signage:* Signage exists in the form of booklets available for free when you enter and purchase a ticket. Limited signage appears in the house, mostly as unobtrusive labels identifying artifacts. Somewhat confusing, the space lacks proper signage to inform visitors of where they are within the house in relation to the annex or what function each room served

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* This theory presents through the chronological manner in which visitors process through the building and encounter information. The tour starts in the industrial part of the building where the jam packing occurred and visitors gain information about the beginning of WWII. As patrons progress through the building into the annex the tour ends in with the revelation of what happened to everyone that was living there

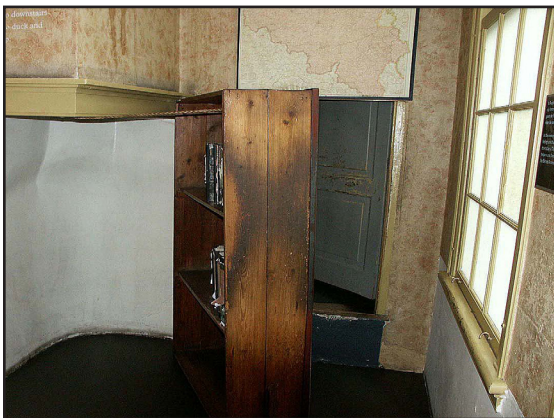
*Discovery:* N/A

*Constructivist:* As visitors exit the house, they enter into a museum displaying the Diary of Anne Frank in multiple languages, and then move into a room with several

groups of computers. These computers allow visitors to ask questions and explore the answers to them through a website full of information on the house, its former occupants, and World War II.

*Preservation:* The house appears in a well preserved state at this time, however proper precautionary measures do not exist to limit continued wear on the house such as mats to protect the floor, or coverings for the walls. The wall in the annex where Anne Frank created a collage of magazine images as well as a few areas where Mr. Frank pasted a map marking the liberation movement all have clear plastic or glass over them to prevent people from touching these sensitive artifacts. The researcher observed that it is quite powerful to see artifacts still glued to the wall from someone you have read about.

*Circulation:* Led through the exhibit in a linear manner, visitors are allowed to experience the space room by room starting with the packing facility, moving through the annex, and ending at a museum and gift shop. Movement through the space is slow due to the large crowd of visitors.



**Figure 3.31:** Open bookcase that concealed stairs leading to secret annex



**Figure 3.32:** Exterior of Anne Frank House

### *Wooden Shoe Factory, Zaanse Schans*

*Interactivity:* Primarily visual, visitors are led into a long, wooden building with many artistic wooden shoes on display in glass cases and simpler designed shoes for sale hanging from the ceiling and overflowing on shelves filling the room. At the opposite end of the building from where you enter, a man dressed in overalls stands beside a milling machine and does demonstrations on how wooden shoes are made today and provides a history of the wooden shoe.

*Materials, light, color:* The building itself is primarily natural dark wood. The floor at one end is covered in wood chips from the shoe making demonstrations. Some glass exhibit cases display highly ornate artistic shoes, and metal machinery fills the end of the building where the demonstrations occur.

*Signage:* The only signage available is that seen in the exhibit cases and labeling shoe sizes for sale on each rack.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* The design of the building presents a controlled, linear path for visitors to follow that leads them from finished, ornate shoes in display cases, to the process of shoe manufacturing, to the ability to purchase their own shoes and merchandise

*Discovery:* Allowed hands-on interaction with the shoes at various stages in the manufacturing process, visitors have the opportunity to feel the heaviness of the wet wood, see the amount of water contained in the wood as the manufacturer blows the water out of the finished product, and visual see the shoe being carved from a large rectangular block into an organic mid-sized shoe.

*Constructivist:* Visitors can ask the shoe maker questions about the shoe making



process and the history of wooden shoes, though he provides a thorough explanation of both.

*Preservation:* Aside from the shoes on display in the exhibit cases, there is no easily identifiable preservation occurring at this site as it serves primarily as a tourist gift shop.

*Circulation:* Circular pattern with visitors entering and exiting at one end of a long building, first passing by display cases of ornate shoes, leading to the far end of the building where shoe making demonstrations occur, then around past all the shoes for sale, past tourist gifts and souvenirs to a sales counter, and out the exit.



*Figure 3.33: An artisan demonstrates how to make wooden shoes*



*Figure 3.34: Display case near entrance shows many ornate wooden shoes*

*Madurodam, The Hague*

*Interactivity:* This specialty site showcases important historical buildings and hubs of activity in miniature from around the Netherlands. Many opportunities for interaction exist from visually engaging objects like planes, trains, boats, luggage, and cars that move as well as coin operated interactives that move or create noise.

*Materials, light, color:* There is no limit on the materials and colors present visually, though many materials represented are probably reproductions made from plastic. Without touching the models or talking to the creators, it is hard to tell for sure. Located outdoors and only open during daylight hours the sun lights the site for visitors.

*Signage:* Small numbers, referenced in a booklet received at the main entrance, provide additional information on the buildings such as name and a brief description of purpose. Otherwise the signage is non existent.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* N/A

*Discovery:* As visitors draw near to models movement and sounds catch their attention and pull them in for closer inspection. At the airport, planes move along runways and make noises like they are taking off, while luggage moves along conveyor belts. At a wooden shoe factory visitors can place .25 Euros in a coin box to start a sequence where they hear workers making their shoes, and then a truck drives around the factory to the side where a pair of tiny souvenir wooden shoes drops out of the factory and onto the truck. The truck then drives around to where the visitors stand to deliver the shoes. Many similar interactives surround the site that allow visitors to insert coins to begin the interactive within each miniature.

*Constructivist:* N/A

*Preservation:* This site has the worst scenario for preservation due to being completely

exposed to the elements as well as curious visitors. The models must constantly receive repair, new paint, and service to the moving parts to keep them in working condition. Heavy mold accumulation on several pieces made it apparent that maintenance seems to occur at a low level.

*Circulation:* Circulation occurs in a very haphazard manner. A central concrete ring circles the entire site providing multiple access points to begin viewing the models up close. No arrows or signs indicate a correct or certain order to begin touring.



**Figure 3.35:** Example of the scale of the buildings modeled on this site



**Figure 3.36:** Interactive where delivery truck catches tiny wooden shoes after they are made and delivers them to visitors

## Washington, DC

### *National Archives, Washington, DC*

*Interactivity:* This exhibit provides many opportunities for interaction through computer screens, videos, opening drawers, and operating machines.

*Materials, light, color:* The exhibit uses an abundance of glass with translucent images adhered to the surface, metal, wood, and plastics. Colors vary from one zone to another to aid visitors in understanding that all items in one area relate as well as communicate transitions from one area to the next. Overall lighting provides a midrange of illumination to aid in navigating the exhibit while brighter point lights highlight certain key points, or educational ideas, within each zone.

*Signage:* Very clear and easily identifiable signage can be found throughout the exhibit. The hierarchy for signage includes large signs denoting the change in big idea from one area to the next while large text panels give overall information and even smaller labels provide artifact specific information.

### *Educational Theories:*

*Stimulus-response:* Several interactives allow visitors to move interactive computer components to activate videos, or touch objects to hear them make noises. Visitors learn that by investigating through touch and movement, the exhibit responds visually and auditorily while providing information.

*Expository-didactic:* There are five main zones of information that follow themes from the Preamble of the Constitution; “We the People” is about family records and citizenship; “To Form a More Perfect Union” explores records of liberty and law; “Provide for the Common Defense” covers war and diplomacy; “Promote the General Welfare” includes records of frontiers and firsts; and “To Ourselves and Our Posterity” centers around records for future generations.

*Discovery:* Many exhibits allow visitors to open drawers, pick and choose topics

to learn more about through interactive computers,

*Constructivist:* N/A

*Preservation:* This exhibit has one zone devoted to preservation and storage of media and various historical documents and data and the proper procedures to preserve items for years to come. Several documents on display in this exhibit

*Circulation:* Circulation overall consists of circular movement with visitors following winding paths through the five zones.



**Figure 3.37:** Visitors slide the waist high computer panel left and right to activate a video on the topic listed on the folder above the computers position



**Figure 3.38:** Video provides information on immigrants into the U.S.



*International Spy Museum: "The Enemy Within: Terror in America -- 1776 to Today,  
Washington, DC*

*Interactivity:* Moderate interactivity provides visitors with the opportunity to give feedback on a computer regarding their opinions of terrorism, while motion activated videos show footage of immigrants and the Ku Klux Klan, KKK, while headsets provide the auditory component.

*Materials, light, color:* The exhibit as a whole is dimly lit, which gives visitors a feeling of darkness and reduces their ability to see far ahead to other displays. Materials consist mostly of wood, plastic, glass, fabric, and some metal. Bright colors provide accents and serve as focal points of information within the exhibit as the majority of colors follow a muted, dark theme.

*Signage:* Plenty of signage fills the exhibit space. The first sign encountered is a timeline that runs from floor to ceiling in height and approximately thirteen feet in length. The timeline provides text with historical facts on terrorism in America reinforced with images. Large headings attached near the top of exhibits indicate the topics such as the KKK or Oklahoma City, medium sized text panels provide the bulk of the information presented, and smaller labels identify artifacts.

*Educational Theories:*

*Stimulus-response:* N/A

*Expository-didactic:* The timeline presents a very good linear overview of terrorism in America and the escalation of violent acts through the nation's history. The organization of the exhibit in a linear manner allows less visitors to learn general information about terrorism as a whole in the beginning and see more specific examples of acts of terrorism as they progress through the exhibit. In this way, each piece of the exhibit builds off of previous exhibits.

*Discovery:* Through visual cues such as lighting changes, motion activated videos,

and changes in exhibit textures, visitors have the opportunity to engage and learn through many methods; watching videos, listening to sound bites, and reading text.

*Constructivist:* N/A

*Preservation:* Few artifacts within the exhibit result in less need for artifact specific preservation. However the overall exhibit requires preservation in order to last for years to come. Text panels and video screens require maintenance, repair, and cleaning. Depending on the life of the exhibit, whether it is a traveling exhibit or if it will be destroyed after its time at the Spy Museum also determine the level of preservation required.

*Circulation:* Linear circulation pattern with few options for visitors to deviate from the assigned path.



**Figure 3.39:** Lights direct visitor attention to important signage and details



**Figure 3.40:** A variety of materials and colors along with interactive videos grab visitors attention

## **CHAPTER IV**

### **UNVEILING THE DESIGN PROCESS**

The design process typically begins with a problem that needs resolution. The range of design problems vary in scope and scale from: a home owner who needs more space for an expanding family, the ever changing needs of museum exhibit design in which the same space must serve a multitude of diverse subject matter, and a car manufacturer, who strives to design a car for quadriplegics. As varied as the issues and the results, all designers, including architects, exhibit designers and product designers, tend to follow a similar series of steps to reach their final design. Generally these steps include: research, site visits, schematic design (concept sketches and models, bubble diagrams, and possible color schemes), design development (more refined sketches and models, established space plan, defined color scheme), and construction documents (detailed drawings and models of the final product). For this design, the researcher also attempted to develop a cohesive design using techniques from design fundamentals. The designer/researcher followed similar steps in the design process, researching the implementation of interactives within the museum environment.

In the fall of 2006, the researcher commenced design work on a museum exhibit located in the temporary exhibit space of approximately 300 square feet at the Greensboro Historical Museum (GHM); located at 130 Summit Avenue, Greensboro, North Carolina. This design allowed the researcher to investigate a means to present



artifacts in an interactive manner while remaining sensitive to preservation needs of the objects. The exhibit focused on Dolley Madison and utilized artifacts owned by the GHM. Before the design work commenced, the designer conducted research.

### **Research**

Research occurred throughout the design process and began with a review of literature, article, book, and internet searches on the subject. As theories and designs were tested, accepted, or rejected, the researcher undertook research to justify or replace the particular design(s) selected. In this first phase of the design process, research focused on Dolley Madison; life in early nineteenth century America, and the use of interactives in museums, with written descriptions and precedent examples. Imperative to the development of this exhibit, the researcher learned the preservation needs and limitations for individual artifacts (Table 4.1). Before beginning work, the designer contacted the museum and obtained a complete artifact list, drawings and measurements of the exhibit space and how the space related to the building as a whole, and lighting and HVAC information within the exhibit space.

Artifact Type	Recommended Relative Humidity (RH)	Recommended Light and Temperature
Paper	45-55% RH	5 footcandles, 65° F
Textiles	45-55% RH	Silks, velvets: 5 footcandles, 65° F Fur, feathers, hair: 5 footcandles, 65° F Skins, leather: 5 footcandles, 65° F Dyed materials: 5 footcandles, 65° F Natural fibers: 5 footcandles, 65° F
Parchment/ ivory	50-55% RH stable/ constant	5 footcandles, 65° F
Wood	50-55% RH stable/ constant	5 footcandles, 65° F
Metal	40% RH or lower	Not listed
Finishes	50-55% RH stable	Painted surfaces: 5 footcandles, 65° F Lacquered surfaces: 5 footcandles, 65° F

*Table 4.1: Chart detailing materials and the recommended levels for relative humidity, temperature, and light to preserve the life of the artifact. Abstracted from a chart in Bachmann, K. (1992). Conservation concerns: a guide for collectors and curators. Washington, DC: Smithsonian Institution Press.*

In addition to texts read and discussed in the literature review, the designer reviewed books, articles, and searched websites on Dolley Madison to gain a better understanding of the First Lady and life in the early nineteenth century to establish themes and ideas used in educating the public through the museum exhibit. Catherine Allgor's book, A Perfect Union: Dolley Madison and the Creation of the American Nation (2006), served as a primary source for background information on Mrs. Madison. Allgor spoke at the Greensboro Historical Museum on Monday, May 22, 2006, and the researcher attended this book signing and presentation as an opportunity to gather further information on Dolley Madison, while also acquiring Allgor's insight into the life of Mrs. Madison. The researcher used this information to refine topics presented within the exhibit.

### *Approaches to Dolley Madison's Life*

Dolley Madison represented the main idea governing this exhibit; however selection of more refined topics aided in the design process, especially given the size limitations of the 300 square foot space. Before attaining a broader understanding of Mrs. Madison's life, several ideas for topics emerged; (1) Dolley Madison rescuing the portrait of George Washington from the burning White House in 1814, (2) creating a period room to set people into the style and mood of the early nineteenth century, (3) comparing contemporary notions of Dolley Madison as a snack cake to historical fact, or (4) having a first person interpreter portray Mrs. Madison. Throughout this process, the researcher focused on incorporating methodological approaches reflecting theories of learning, preservation, and material culture as represented by Dolley Madison's existing artifacts and known accomplishments. Exploration of these ideas led to the designer developing the big idea.

### *Artifact Selection*

At this stage, the designer narrowed the artifact list to determine exactly which artifacts visitors saw, though the methods of display had not yet been determined. When determining how to display the artifacts, the designer took into account preservation concerns while also trying to push the boundaries of user interactivity by enabling visitors to touch and engage actual artifacts, key elements to the success of the exhibit and physical links to Mrs. Madison. The known artifacts available at the Greensboro Historical Museum included: two reproduction gowns, her slippers and turbans, a snuff

box, a calling card case, calling cards, letters, and a reproduction of the Gilbert Stuart portrait of Mrs. Madison.

### *Museum Visits*

Before beginning to design, the researcher visited several museums (Table 4.2), took photos, drew illustrations, and took notes documenting pros and cons of interactive components within each museum. The selected museums represented a wide variety of interactive exhibits, methods of interpretation, use of lighting, levels of artifact preservation, and overall design elements. The selection of a broad range of facilities - art, history, science, historic house, and specialty museums - provided diverse examples to explore and document while keeping the designer open to ideas about preservation of artifacts. Observations made at these sites provided the basis for beginning design work as the designer acquired knowledge of existing practices and limitations upon which to expand. Additionally the research provided different approaches to educating the public through artifacts and material culture.

<b>Museum Name</b>	<b>Type of Museum</b>	<b>City, State, Country</b>
Blue Ridge Institute & Museum	History	Ferrum, Virginia, USA
Shenandoah Valley Museum	History	Winchester, Virginia, USA
Pope-Leighey House	Historic House	Alexandria, Virginia, USA
Museum of Frontier Culture	Living History	Staunton, Virginia, USA
Philadelphia Museum of Art	Art	Philadelphia, Pennsylvania, USA
Rembrandt House Museum	House & Art	Amsterdam, Netherlands
Coster Diamonds	Specialty/History	Amsterdam, Netherlands
Anne Frank House	Historic House	Amsterdam, Netherlands
Wooden Shoe Factory	Specialty/History	Amsterdam, Netherlands
Madurodam	Specialty	The Hague, Netherlands
Exploris Museum	Science	Raleigh, North Carolina, USA
North Carolina Museum of History	History	Raleigh, North Carolina, USA
St. Philips Church	History	Old Salem, North Carolina, USA
Old Salem Toy Museum	History	Old Salem, North Carolina, USA
National Archives	History	Washington, DC, USA
International Spy Museum	Specialty/History	Washington, DC, USA

*Table 4.2: Chart of museums visited for the purpose of documenting interactive exhibits*

### **Cohesive Design**

Artifacts serve as containers of memories and can connect present individuals to historical events (Lowenthal, 1985, Crane, 2000). The historical importance, cultural value, and rarity of artifacts lend them to require protection in order for generations of people to enjoy and learn from them. Museums provide services of storage, protection, and display. Most often the thrill of seeing a rare artifact draws large crowds to a museum, thus artifacts often serve as focal points for exhibit design.

Considering museum design where artifacts often take center stage, the designer provided a pleasing, unified space that allowed the artifacts to be noticed and affect visitors. Within the scope of the Dolley Madison exhibit, the designer considered, pushed aside, and reworked many options to develop the final product. The space required sculpting with many limitations working against the creation of a cohesive

visual environment. Cohesive design consists of fundamental design elements including but not limited to; color, line, shape, texture, unity, balance, scale, rhythm, and composition (Mahnke, 1996, Lauer, 1985, Goldstein, 1989). The designer attempted an individual and combined use of each of these elements to strive for a well thought out, articulated design to compliment the artifacts presented.

### **Schematic Design**

Based on research, the designer established a broad theme or “big idea” to guide the design as such theoretical frames provide visitors with an overriding theme to interpret the exhibit (Serrell, 1996). All points addressed within the exhibit, from simple to complex, fit within the big idea and typically aided visitors in understanding material presented to them. For the Dolley Madison exhibit, the researcher considered feminine traits of women in the early nineteenth century, comparison of feminine and masculine roles in early nineteenth century society, textiles, and consideration of reproduction period rooms. The designer explored these themes through perspective drawings and physical and digital models (Drpic, 1988, Moore, 1990). The designer also considered placing translucent images over the glass doors leading into the Jug Town exhibit and developed a narrative (accompanied by a matrix), documenting preservation strategies for the artifacts in the exhibit. With assistance from a design review focus group, the researcher assessed various design schemes and selected one to move forward that allowed interaction while addressing preservation concerns.

## **Design Development**

Based on input from the design review focus group and IAR faculty, the researcher undertook design development with a more focused big idea in which the designer considered public versus private roles and global history in the early nineteenth century. During the design development phase, the designer produced both an overview of Dolley Madison's life in outline form, and a detailed circulation scheme/pattern considering politics, Mrs. Madison's image, letters, and social events all manifest through plans, sections, and models (White, 1986). Gilbert Stuart's paintings served as a good source to determine colors popular in the nineteenth century, especially those of Mrs. Madison and George Washington, historical documents that aided in establishing a cohesive design through content and color. The designer used the final scheme as a case study and analyzed the design for effectiveness through studio exploration (desk critiques, design review focus group meetings, interim reviews, and final jury). Critics included Jo Leimenstoll, Patrick Lee Lucas, Novem Mason, Robert Charest, Tommy Lambeth, Benjamin Filene, as well as members of the design review focus group at the Greensboro Historical Museum.

## **Design Refinement**

The final stage of design resulted in the establishment and implementation of the big idea, "extraordinary accomplishments: power and the party planner," as seen through various themes and exhibit elements. The designer produced finalized, measured drawings of the exhibit including elevations and sections of all walls and exhibit cases. This stage also included development of a specifications and budgets sheet listing

vendors, cost of materials and finishes for floors, walls, ceilings and cases; lighting plan, details, and specifications (light fixtures and types for both artifacts and the space as a whole); exhibit case details (models, elevations, and sections); detailed graphic information schemes (sample labels and panel texts, as well as graphic images included); in addition to scaled graphic representations in a printed format. This stage also included both informal and formal critiques with the reviewers as noted above.

### **Critiques**

Reviews and critiques provided the researcher/designer with valuable feedback specific to the Dolley Madison exhibit and challenged the designer to move beyond theories by citing specific flaws and successes within the proposed exhibit. In seeking a diverse group of people for criticism, the designer developed a better conceived interactive exhibit. The broad critique audience included, University of North Carolina at Greensboro (UNCG) design students, UNCG professors in the Interior Architecture department, and a design focus group including: UNCG Public History Coordinator, Benjamin Filene, and Greensboro Historical Museum staff: Adrienne Garwood, Betty Phipps, Susan Webster, and Martin Kane. Four to five of these critiques occurred throughout the course of the fall semester 2006. Not everyone was present at each critique, which enabled the designer to attain overall commentary with a reduced chance for reviewers to be influenced by the opinions of others. Critiques occurred with UNCG students and faculty at one venue and Museum staff at a separate venue. With detailed information from the critics, the researcher wrote the analysis section of the thesis,



documenting both the process and decisions made within the design to balance the needs of preservation and use of artifacts.

### **Post-Design Analysis**

In addition to feedback gathered from critiques, the designer gathered more focused feedback to fully investigate the success of the design in balancing preservation and interpretation strategies. In the spring semester following the design phases, the researcher developed a qualitative questionnaire asking focused questions relating to how well each of the following was met: preservation of artifacts, design of the space, and interpretation. This allowed the designer to obtain directed feedback from UNCG faculty and GHM museum staff.

Data gathered from these professionals allowed for qualitative analysis of the exhibit design. Upon compiling these results, the designer made generalizations regarding the effectiveness of the overall design, methods of preservation, and interpretation. Additionally, the researcher documented in writing all data produced from the design process, critiques, and questionnaires to benefit anyone interested in interaction within exhibits. Utilizing information gathered during the design process, the researcher assessed common themes within all steps that resulted in suggestions for how to balance preservation and interaction when designing museum exhibits. The details of this process, beginning with research and going through schematic design, design development, design refinement, and ending with post design analysis, reveal the thought process of the designer as well as the evolution of the exhibit.

**CHAPTER V**  
**DESIGNING FOR DOLLEY**

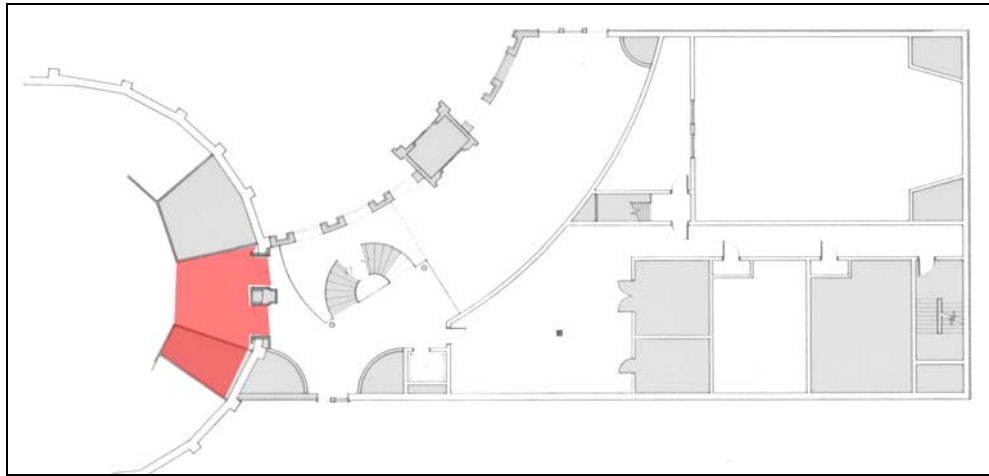
Henry Flowers described the purpose of a museum best in his statement, “It is not the objects placed in a museum that constitute its value, so much as the method in which they are displayed and the use made of them for the purpose of instruction” (Conn, 1998). This quote embodies the meaning and purpose behind the designer’s development of an interactive exhibit space. Aided by research and first-hand documentation from other exhibits, the designer tested and explored several ideas to interpret and present Dolley Madison through the artifacts Mrs. Madison left behind. These explorations can be seen throughout all three phases of design: schematic design, design development, and design refinement.

**Schematic Design**

Schematic Design 6 weeks	Design Development 7 weeks	Design Refinement 3 weeks	Post Design Analysis 2 weeks
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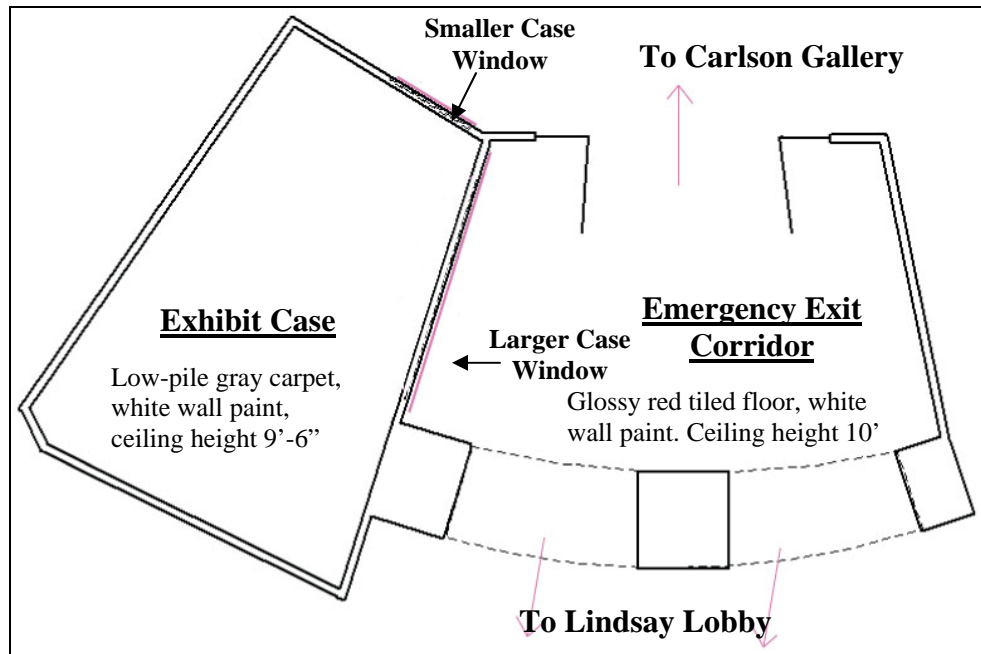
In order for a design to fit into the allotted space, the designer obtained accurate measured drawings of the space and took field measurements, confirming the accuracy of the scaled plan of the assigned exhibit space (Figure 5.1). The designer noted important features of the space including; overall room dimensions, square footage, ceiling height, location and dimensions of vents, outlets, lighting elements, windows, and doors. The designer benefited from a close proximity to the museum and ease of access as it allowed

for frequent visits to check on dimensions, location of vents and lights within the exhibit space, as well as documentation of existing materials. Fortunately in this case, the researcher was able to access the site often and received help from museum staff when questions arose.



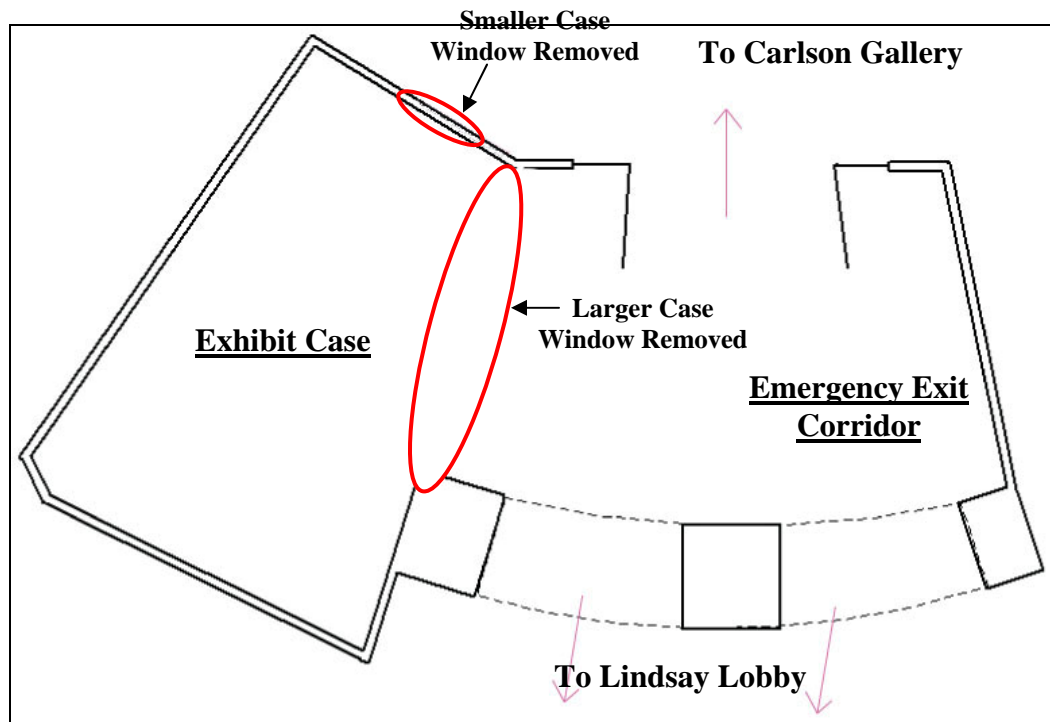
**Figure 5.1:** Plan of the second floor of the Greensboro Historical Museum with the exhibit space used for this project shown in red

Through site investigation, the researcher learned that the temporary exhibit space served primarily as an emergency exit corridor and provided passage between the lobby and main exhibit galleries (Figure 5.2).



*Figure 5.2: Floor Plan of Temporary Exhibit Space*

In addition, the designer noted that the exhibit space consists of two rooms: a 120 square foot walk-in exhibit case, for the display of large items, and the 180 square foot emergency exit corridor, with varying ceiling heights (10' in the corridor, 9'-6" in the case). At first glance the designer concluded that the rounded trapezoidal shape of the corridor and fire code restrictions greatly restricted design options for the space. To maximize the available space, the designer proposed to remove the larger case window between the emergency exit corridor and the 120 square foot exhibit case as well as fill in the smaller case window, resulting in expanded wall space in that area (Figure 5.3).



*Figure 5.3: Floor Plan of Temporary Exhibit Space with large and small case windows removed.*

The designer noted floor and wall finish materials as indicated in figure 5.2. The glossy red tile created a sense of a slick surface that visitors wanted to pass over quickly, while the carpet created a softer walking surface but neglected to link to the tile through color or texture. The white paint on the walls remained neutral and neither added to nor subtracted from the appeal of the space. The designer considered a change of materials as a strategy to unify these two areas as well as create an environment that caught visitors' attention and caused them to pause and view the Dolley Madison exhibit.

As the design process unfolded, the designer sought to further understand the areas surrounding the exhibit space. Visiting the museum, Adrienne Garwood, Assistant Curator of Exhibits, aided in answering all questions fully and provided information

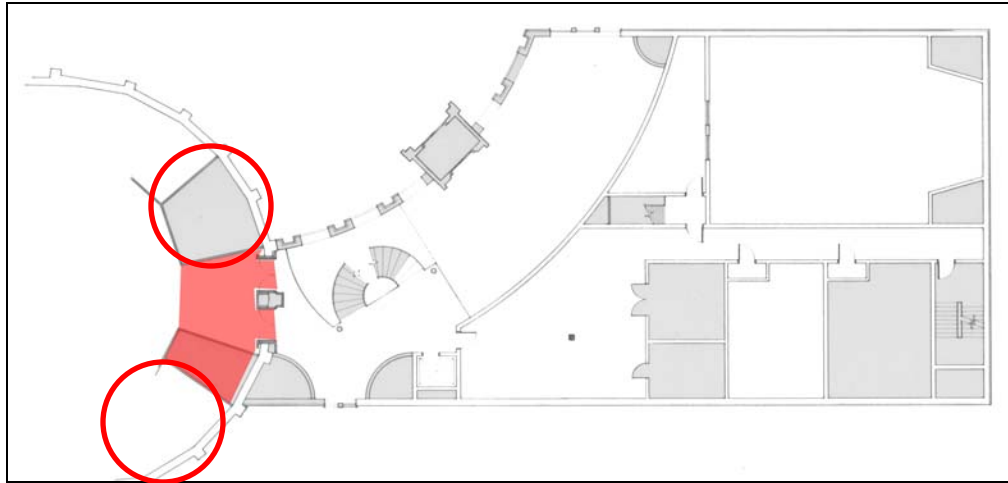
including the use of each surrounding room, and floor plans of the exhibit space and how it fit into the surrounding building. The designer considered options for enlarging the space including: moving walls, moving glass doors, altering glass doors, raising the ceiling, removing the exhibit case wall, and removing the door in the exhibit case (Table 5.1).

<b>Option</b>	<b>Opportunity</b>	<b>Challenge</b>	<b>Recommendation</b>
Moving Walls	More exhibit space	Affects other exhibits	Existing to remain
Moving Glass Doors	More exhibit space	Interrupts visitor circulation	Existing to remain
Applying Transparent Film to Glass Doors	Causes visitors to pause in exhibit	Ensure the transparency does not impede emergency exit requirements	Apply film
Raising Ceiling Height	Room seems bigger	Affects exhibits on floors above and may interfere with HVAC	Existing to remain
Removing Wall	More exhibit space	Loss of large case to display artifacts	Remove wall
Remove Door in Exhibit Case	Provides more wall space to present information	Reduces number of exits/ entrances	Remove door

*Table 5.1: Options for altering the exhibit space*

The designer observed limitations of these considerations suggesting that the walls on either side of the exhibit space could not be expanded outwards as the Mendenhall-Simpson Room and Bellemeade bedroom flank both sides of the rooms (Figure 5.4). If the sheet rock walls were “pushed out” into adjoining spaces, the designer would need to consider how to adjust the affected exhibit spaces accordingly. The designer learned that the glass doors leading into the adjacent Jug Town Pottery exhibit could not be expanded

into that area as it would cause visitor circulation problems by impeding their path. The only room available to expand the temporary exhibit space doors into existed in a semi-circular path approximately five feet wide where visitors walked to view period room exhibits. Pushing the doors outward into this area would force visitors to weave in and out of the Jug Town exhibit to view the period rooms and might discourage them from viewing these rooms. However, the application of a graphic image to the glass doors provided an option that served as a means to visually block a full view of the Jug Town exhibit from the temporary exhibit space. Using a slightly transparent film for this appliqué provided a hint of what lay on the other side of the doors while creating enough visual interest that visitors might stop and look at the artifacts presented in the Dolley Madison exhibit instead of barreling through to Jug Town Pottery. Altering the ceiling by raising it could not occur due to the presence of exhibits on the floor above this space. Lowering the ceiling emerged as an undesirable alternative option because the small space would be further reduced in scale. Because of these spatial and structural limitations, the designer determined that removing the wall between the display case and hallway provided the best option for enlarging the overall square footage of the exhibit space with the least number of consequences. The final option to remove the door leading into the exhibit case potentially aided in visitor circulation by reducing the number of entrances and exits from the space, while also providing more wall space for exhibitions.



*Figure 5.4: Mendenhall-Simpson Room and Bellemeade bedroom shown (red circles) flanking the temporary exhibit space*





The designer explored these options for altering the space in an attempt to expand the existing rooms. The current exhibit space presented many problems due to the small size, limitations due to fire code and emergency exits, and additional challenges where the walls meet at less than and more than ninety degrees. Restricted to the use of this space and limited to minimal alterations without affecting other exhibits, the designer moved forward in the design process.

#### *Design Parameters*

The process of selecting artifacts involved acquiring the artifact list from the Greensboro Historical Museum, determining which artifacts best represented the big idea, and balancing interaction and preservation. The following chart shows descriptions of the artifacts used in the exhibit, their preservation needs, and images (Table 5.2). Based on guidelines related to lighting, relative humidity, and temperature, the designer determined the appropriate environment for objects. Following the standard museum



practice, that curators group artifacts with similar preservation needs in the same case, the designer arranged a first schematic assembly of objects. Examining the artifacts available at the GHM for this exhibit, the designer considered grouping the paper letters and the dresses together as they required a relative humidity of 45-55%, lighting of 5 footcandles, and a temperature of 65° F. This decision allowed for potential consideration of relating the artifacts to one another through the big idea and the added benefit of reducing the number of cases that might require monitoring by curators.

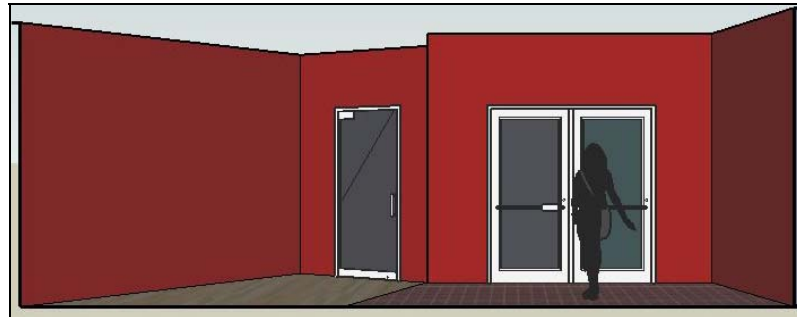
Artifact Description & Needs	Artifact Image
<p>Dolley Madison Ivory Calling Card Case (50-55% RH stable/constant, light and temperature: 5 footcandles, 65° F) and Paper Calling Card (45-55% RH, light and temperature: 5 footcandles, 65° F)</p>	
<p>Reproduction silk velvet (L) and silk charmeuse (R) gowns with turbans and shawls worn by Dolley Madison. (45-55% RH, light and temperature: 5 footcandles, 65° F)</p>	
<p>Dinnerware, slippers, letter and envelope of correspondence, and a card case all owned by Dolley Madison. (50-55% RH stable, light and temperature: 5 footcandles, 65° F)</p>	
<p>Reproduction of Gilbert Stuart portrait of Dolley Madison (50-55% RH stable, light and temperature: 5 footcandles, 65° F)</p>	

*Table 5.2: GHM Dolley Madison artifacts used in the exhibit and their preservation needs, Photographs: A. Wade (Spring 2006)*

To guide the design process, the designer began with a concept or main idea that influenced many design decisions. In the museum setting, these concepts, often called “big ideas”, set the stage for the educational goals reinforced throughout an exhibit (Serrell, 1996). The designer strove to incorporate as much interaction within the exhibit as possible based on research conducted on four learning theories with a focus on discovery and constructivist learning based on improved educational results from interactive exhibits. At this stage, the designer did not allow preservation concerns to limit the scope of interactive designs developed, however artifact preservation remained foremost on the designer’s mind. When approaching this design, the designer contemplated an exploration of femininity and the essence of the early nineteenth century without creating a “period room.” Focusing on the dresses in the collection, the designer thought textiles seemed the most appropriate method to convey these ideas. At this stage educational goals and options for applying teaching and learning theories remained broad to allow the designer to consider a greater variety of design options. The designer focused on trying to attract visitors and get them to interact with and within the exhibit. At this stage, the big idea included a broad focus on textiles, feminine qualities, and representing the essence of the early nineteenth century. The successful incorporation of these ideas into an exhibit relied heavily on fundamental design principles in order to form a unified design.

A cohesive design communicates ideas well through the use of fundamental design principles including; color, line, shape, texture, unity, balance, scale, rhythm, and composition. Color schemes considered initially came from an understanding of the use

of colors and fabric patterns from the period, which consisted of vivid dark reds, blues, and bright yellows. The designer used the color red, asserting that it showed warmth and contrasted with the bright teal in the adjoining second floor balcony (Figures 5.5 and 5.6).



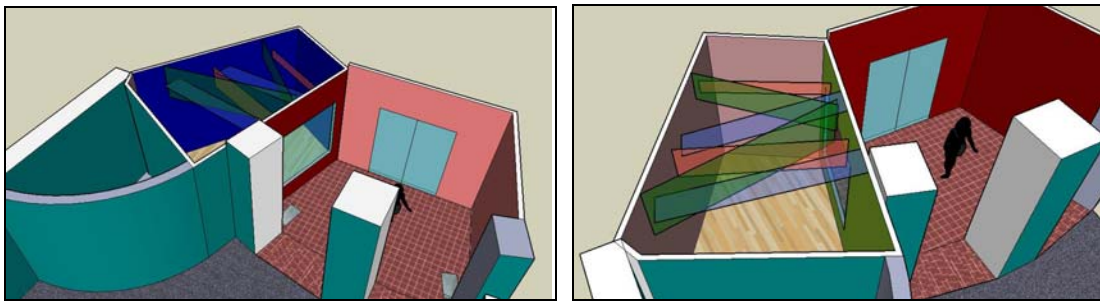
*Figure 5.5: The exhibit space shown with bright red paint signifying power*



*Figure 5.6: View from second floor balcony looking into the temporary exhibit space shows the teal paint color.*

The designer introduced fabric throughout the exhibit in a variety of forms including 1) draping small sections of panels from the ceiling to serve as curtains to first conceal and then reveal information and images to visitors slowly; 2) hanging fabric banners leading from the first floor lobby area into the exhibit with printed questions and images to entice visitors; 3) attaching fabric to the wall to frame and draw attention to

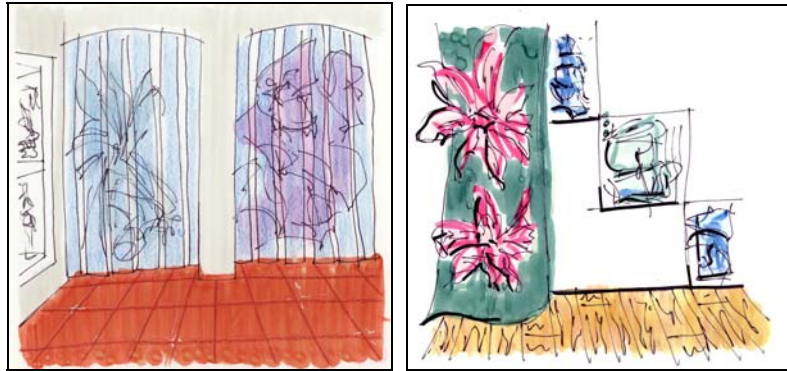
text panels within the exhibit (as seen in Figures 5.7-5.9); and 4) creating a datum line around the exhibit with fabric panels that set the height for all items attached to the wall (Figure 5.10). The designer identified challenges of using fabric: the need to reduce their flammability and installation issues of how and where to attach the fabric within the exhibit.



**Figure 5.7:** Examples of color schemes attempted along with colored fabric strips hung from the ceiling



**Figure 5.8:** Illustrations of fabric draped on the ceiling (L and R) and translucent curtains dividing the space (L) as well as appliqué image on glass doors (R)



**Figure 5.9:** Illustrations of fabric curtains over entrance into exhibit (L) and fabric panel accents beside artifacts (R)



**Figure 5.10:** Exhibit space with fabric datum line 3 feet above the finished floor and 2 feet high

Early on in this stage of design the designer developed the idea to place a translucent image of Dolley Madison over the glass doors leading into the Jug Town exhibit (Figure 5.11-5.12). Several purposes informed this design decision: 1) to slow people down and catch their attention, 2) to present a life-size image of Dolley Madison on the doors to greet visitors, and 3) to limit views into adjacent exhibits. Moreover, the designer reasoned that a transparent image prevented confusion during an emergency when people try to exit the building through this exhibit space/ emergency corridor.



**Figure 5.11:** The addition of gowns and text panels as well as the graphics over the glass doors into the Jug Town exhibit



**Figure 5.12:** Addition of fabric panels hanging from the ceiling to create layers and help divide the space

The schematic design process culminated in a peer review. At this review the designer presented a small scale model, a detail of the transparent image of Dolley Madison over the glass doors, and some perspective drawings to capture the essence of the space. Participants in the review included peers and studio professor, Dr. Patrick Lucas.

#### *Comments from Schematic Design Review*

Reviewers reflected on scale and provided the idea of keeping concepts focused on a personal, human scale similar to how Dolley Madison seemed intimately related to



the people she met (Appendix A). Other comments considered a visitation concept: how long someone experiences the space in a museum setting, typically one minute per display case, five minutes for an exhibit space of this size. Recommendations included only using artifacts, objects, and designs with at least two purposes. This addressed the issue of how to show several artifacts in a small exhibit space by limiting the artifacts displayed to those with two or more uses. Reviewers suggested that if an object failed to meet this requirement, it should not appear in the exhibit.

*Designer’s Reflection*

After the schematic design review, the designer realized a need to refine details, space planning, the big idea, and color schemes. The designer focused largely on developing the big idea and looked towards the artifacts for inspiration. The suggestion to only use artifacts with two or more purposes stood out, as space limitations weighed heavily on the designers mind.

**Design Development**

Schematic Design 6 weeks	Design Development 7 weeks	Design Refinement 3 weeks	Post Design Analysis 2 weeks
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The design development phase took the design one step closer to finalization. As a result of the schematic review, the big idea changed to focus more directly on Dolley Madison herself rather than femininity and the essence of the early nineteenth century, as suggested by primary research. The designer compiled an outline to organize the exhibit and to summarize the new focus. The outline addressed the theme that Dolley Madison achieved extraordinary accomplishments and the means through which she



achieved them. An exploration of this big idea occurred through the view of her dual roles as a public and private woman. The benefit for the designer in presenting dualities came through the easy set-up of showing “the flip side” of public life. This resolved some design decisions by allowing the designer to use one or two artifacts to tell two versions of a similar story in one interactive display. A challenge in this idea came in finding images and information showing Mrs. Madison’s personal, intimate image and ideas. Providing visitors with this information would help them relate to the story of Dolley Madison and understand her accomplishments.

In order to address this broader public/ private dichotomy in Dolley Madison’s life, the designer expanded areas of focus to include history and background information about the time period, information on President and Mrs. Madison’s lives, history of the American nation, and concurrent European history. The designer thought that most historians and those familiar with her history know that she was a cultured individual who lived dual lives by privately calling her husband by pet names while following social protocol outside of the home and calling him Mr. Madison. In the social realm Mrs. Madison served as a hostess for many Washington, D.C. dinner parties and worked to make these dinner parties less aristocratic and digestible for the American public at a time when most government parties were viewed as “European” and “un-American” (Allgor, 2006).

The designer considered establishing a more global context during the life of Dolley Madison such as information about Napoleon ruling over most of Europe and helping America acquire the Louisiana Purchase. Due to the small scale of the existing

exhibit space, the designer eliminated presentation of this information, but recommended that museum curators consider it when moving the exhibit into a larger space. In focusing on the domestic sphere, the designer addressed the inequality of husband/ wife roles, the fact that the wives could not vote, and that husbands and wives addressed one another formally as Mr. and Mrs., finally noting that women held no formal role in politics.

To develop the idea of public and private within Mrs. Madison's life and based on the constraints of the exhibit space, the designer focused on Mrs. Madison's time in Washington, DC (1809-1817) and the artifacts that reinforced these ideas. The public aspects of her life revolved around two stages: she was wife of a Secretary of State under Thomas Jefferson's administration, and the First Lady of the nation. The first area focused on her life as wife of the Secretary of State and the artifacts that accompany this role in society: dinnerware, dresses, invitations, and news articles. The second area focused on her life as First Lady and a series of her accomplishments during that time. As the First Lady to live in the White House, she set the precedent for all future First Ladies, and she established the image of the White House, as a symbol of America. Artifacts related to this time in her life, but not in the GHM collection, include the portrait of George Washington rescued from the White House fire in 1814 (Figure 5.13), and images of White House rooms designed by architect Henry Latrobe under her patronage. The designer proposed to bring these artifacts from other museums to this exhibit space as a means to provide physical evidence of the vastness of Dolley Madison's influence on America. Additionally, incorporating these artifacts into the GHM exhibit would present

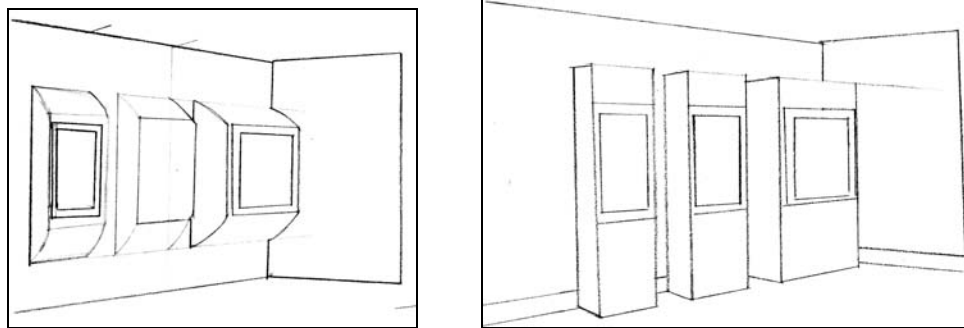
a broader story that moved away from a dominant focus on gowns and dinner parties, items commonly associated with females, and draw attention to Mrs. Madison's less inherently feminine accomplishments. Finally the designer focused on Mrs. Madison's private life and the artifacts related to that: personal letters and correspondence, a snuff box, clothing, and a calling card case.



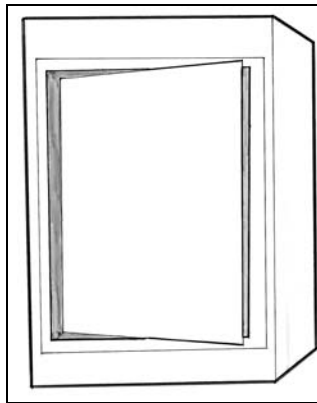
*Figure 5.13: Gilbert Stuart portrait of George Washington saved by Dolley Madison in 1814*

The designer considered all aspects of Dolley Madison's life, with a specific focus on comparing her public and private lives. This focus led to the development of several concepts for the exhibit. One of these interactive concepts incorporated flip panels to show the public image of Mrs. Madison, such as the portrait by Gilbert Stuart, that when spun around by visitors revealed an image of her private life, perhaps a more intimate portrait of her with her hair down (Figures 5.14 -5.17). The snuff box provided another example of public and private in that the public view of the snuff box tended to be the exterior while the more intimate private view on the interior of the snuff box

remained Mrs. Madison's. Another idea consisted of the designer providing a surface and projecting images of Dolley Madison as a public figure with contrasting intimate private images of her. Focusing on the use of discovery and constructivist theories, the designer thought that the motion from changing images would draw visitors' attention and pull them into that part of the exhibit, while also providing them with visual and possibly auditory reinforcement of the big idea.



*Figure 5.14: Two frame designs for interactive flip panels and surface for projecting images, wall-mounted (L), and full case(R)*



*Figure 5.15: Detail of flip panel*



**Figure 5.16:** Plan showing “framed” interactive exhibits in blue and curtained glass cases displaying dresses



**Figure 5.17:** Full case flip panels showing color options and view into Jug Town exhibit

### *Space Planning*

The concept of public versus private life further developed through spatial planning and individual design elements, with four major thematic points of focus for the exhibit: 1) politics, 2) Mrs. Madison’s image, 3) letters of correspondence, and 4) social events. The designer considered each point of focus, artifacts that might represent both public and private aspects of Mrs. Madison’s life: her dresses and her letters to and from

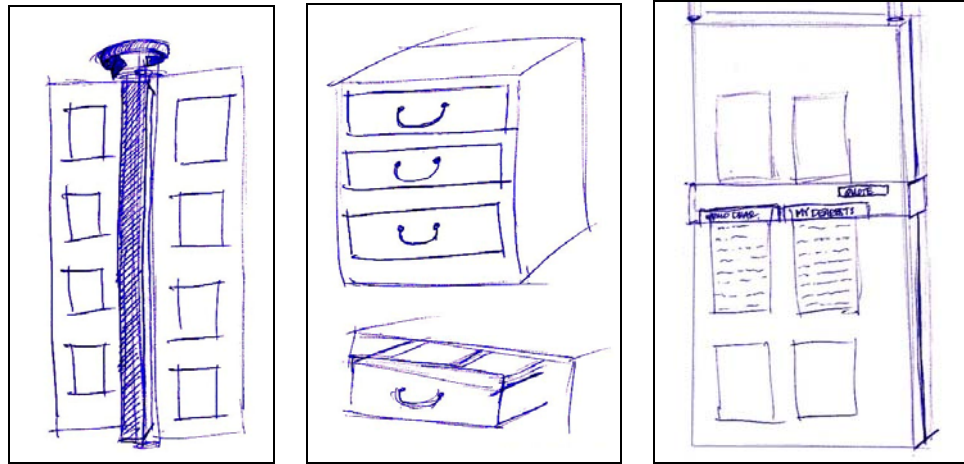
close friends and colleagues. These artifacts seemed fitting as they represented personal items that expressed Mrs. Madison's thoughts, feelings, and ideas of herself. In the designer's estimations the ideas of Mrs. Madison's self-image would be revealed in the exhibit in the fashionable yet conservative style of her dresses, reflecting her Quaker background and knowledge of style and fashion of the day. The designer developed a chronological approach focusing on showcasing images of the fledgling national capitol, and placing exhibit visitors in the 1809 setting of James and Dolley Madison as they advanced counter clockwise around the room through the years of Mrs. Madison's life. The chronological display included how she entertained, her idea of image, and her personal thoughts as seen through her own writing. Upon looking at the artifacts and the stories they told, the designer determined that there was no cohesive way to present these themes chronologically: the ideas needed another method of organization.

### *Letters*

The attempt to design an interactive for the letters Dolley Madison wrote led to the development of several versions of interactive letter exhibits. The designer pushed the idea of interactivity to design exhibits that allowed visitors to touch real or reproduction letters as if they had stumbled upon Dolley Madison's desk and were able to sort through it. In this scenario, visitors would need to pay careful attention to how they handled the fragile letters unless the designer protected the artifacts with laminate or glass. In removing the artifact from first hand physical contact, the designer placed the letters behind glass to protect them fully. Moreover, in thinking through the idea of handling actual letters, it became apparent to the designer the lack of evidence-based

educational goals accomplished by having visitors touching and subsequently damaging the artifacts. In the absence of an interactive paradigm that worked for these letters, the designer developed further ideas.

Two initial ideas emerged as the designer considered simple methods of interaction: 1) placing the letters in drawers that the visitors open to reveal the letters inside, and 2) displaying the letters on a spinning rack that allowed the visitor to pick and choose which letter they read. Wanting to explore a more engaging idea, the designer focused on the learning theory of discovery, and pursued the idea of presenting the letters sandwiched between panes of glass, oriented upright, either attached to vertical supports or hung from the ceiling, allowing multiple visitors to engage the letters at one time and on two sides (Figure 5.18). The interaction would occur when visitors used a magnifying glass (either hand held or on a bar) that would slide up and down over the letters. By magnifying the text, visitors could literally peer up-close at Dolley Madison's personal letters. As part of the design, attentive visitors would notice that these displays incorporated quotes from Dolley Madison embedded in the glass, apparent when the magnifier slid over them. The theory of constructivism would come into play as visitors discussed the letters and hidden quotes with one another. Pushing this idea further, the designer developed a display that placed the original letters in a second case and showcased a copy of Mrs. Madison's script in the form of internally illuminated engravings in the glass panels. This form of presentation used light to attract visitors' attention towards the letters.



**Figure 5.18:** Letter interactives: spinning (L), drawer (Center), and sandwiched between panes of glass with a magnifying bar (R)

### *Dinner Parties*

Turning to the artifacts for inspiration led the designer to the idea of visitors experiencing a dinner party hosted by Mrs. Madison. With this approach, Mrs. Madison would visually greet them with her image on glass doors. Visitors would trip a motion detector, prompting a low-level audio recording that lasts for three minutes and recounts a reenactment of Dolley Madison inviting the guests into her party. For the remaining time on the recording, visitors would hear typical sounds from dinner parties, such as social gossip and the clanking of dinnerware and glasses. The designer considered that this type of interaction might confuse visitors by using sounds of a dinner party without visual evidence of a party occurring and distract them from conversations they might have within the rest of the Dolley Madison exhibit. The designer needed to provide a comfortable exhibit environment for visitors to easily understand the experience created free of unnecessary distractions so focus shifted to dinnerware.



Allowing visitors to understand the dynamics of parties in the early nineteenth century seemed best achieved through direct contact with the dinnerware that guests, hosts, and servers would have used. Following discovery and stimulus-response theories, the designer strategized means to tell the stories of Dolley Madison, her guests, and servants, setting a typical place setting that, when touched, would produce auditory commentary by different people at the party. For instance, if visitors touched the silverware they would hear a simulated story of a servant's behind-the-scenes role in preparing and cleaning for a party. Touching a glass would activate a story from a guest about the lovely party, social gossip, and a description of their friendly hostess. Touching a table cloth would activate a story from Dolley Madison about her thoughts regarding seating charts, worries, and relief as the party occurred without disaster. In this way the material culture interpretation would come directly from visitor interaction with the artifacts. To make this interaction more apparent, buttons and/ or labels would be placed on interactive areas on the place setting. While the designer developed various types of interaction to occur within the exhibit, she simultaneously advanced ideas to create a cohesive design throughout the space.

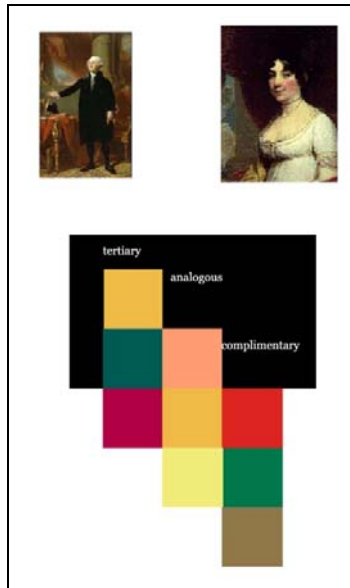
### *Dresses*

Of all the various Dolley Madison artifacts within the Greensboro Historical Museum collection, two stood out: her reproduction gowns. The designer considered the incorporation of these gowns into the exhibit in the following three ways: through discovery learning by allowing visitors opportunities to try on reproduction gowns and layers of underclothing; through expository-didactic learning by presenting the dresses on

forms encased in glass; and through stimulus-response learning by physically handling the dresses and feeling the texture of the fabrics. While these explorations permitted great interaction, encasing the dresses in glass separated the visitor and artifacts. Regardless of approach, preservation for these artifacts needed to occur. The glass provides a protective barrier for the dress reducing deterioration caused by oils on people's skin, wear and tear from visitor's trying on the clothes, and light exposure. At this stage in the design process the designer determined that visitors obtained no inherent educational goals related to the big idea from physical interaction with the gowns, and decided not to expose the artifacts to excessive wear and ultimately deterioration purely to incorporate an interactive experience. If the big idea focused on textiles in the early nineteenth century, allowing visitors to handle the fabrics might be necessary to reinforce educational goals of fabric quality and how clothing was made. During design development, the designer proposed dresses presented on forms, or using the GHM staff's term, "in the round" in glass cases. With this approach, curtains shielded the dresses from excessive light as the designer placed them over and around the glass cases so that, when pulled back, light briefly fell on the gowns. Drawbacks to this approach included getting visitors to touch the curtain and reveal an artifact on display and ease of use by all people including the handicapped, children, and the elderly. The main drawback for the designer came in linking the curtained glass case to the big idea and justifying it as more than purely a preservation need.

### *Cohesive Design*

Further development of a cohesive design would enable visitors to easily navigate and engage the exhibit while understanding the relationship between concepts within the two rooms. At this stage the designer developed a color scheme based upon the paintings by Gilbert Stuart of President Washington and Mrs. Madison (Evans, 1999). Three color schemes developed including, 1) tertiary, consisting of yellow-orange, teal, and mulberry; 2) analogous, with yellow-orange, peach, and mustard yellow; and 3) complimentary, with burnt orange, Kelly-green, and greenish yellow (Figure 5.19). After deciding on these three color schemes, the designer explored further options for placement and concentration of colors, primarily focusing on having a dominant color on one wall, for instance, red with a contrasting bright teal on the other walls and yellow-orange as an accent color. Experimenting with color application through a sketch-up model of the exhibit space caused the designer to consider more color options and led to selection of several Sherwin Williams paints in dark red hues with contrasting khaki tans and browns as a light accent color. In attempting to incorporate the theory of discovery into paint selection, the designer considered applying textured paints to the walls to provide visitors with a more engaging environment and accent certain aspects of the exhibit, for instance a tactile band of paint around the room where all interactive exhibits occurred. Not wanting the paint to distract from the exhibit, and lacking a link to the big idea the designer abandoned the use of textured paint.



*Figure 5.19: Gilbert Stuart paintings used for color selection and three color groups created tertiary (L), analogous (Center), and complimentary (R)*

The designer reconsidered the development of period rooms as a means to display the artifacts and immerse visitors into an environment reminiscent of Dolley Madison (Figure 5.20). This idea allowed the designer to display the artifacts in an environment similar to the one they existed in when Dolley Madison owned them. One idea the designer considered consisted of using a large window frame seen in the rear of both rooms in Figure 5.20 to set the stage for the time period by showing projected images of D.C. in the early nineteenth century. The designer used these images in an attempt to incorporate historical information while providing the visitor with a visual understanding of the young and undeveloped American nation during the Madison's era. Using the constructivist theory the designer hoped visitors would question any preconceived notions they have of the early Presidents and their wives, especially James and Dolley

Madison (Piaget, 1978). Further consideration of these ideas caused the designer to pull away from them for a middle ground approach that was not as modern looking as the flipping frames idea, but also did not lean so strongly towards creating a reproduction room. The designer asserted that the focus needed to remain on the artifacts and their message of Dolley Madison as a powerful woman.

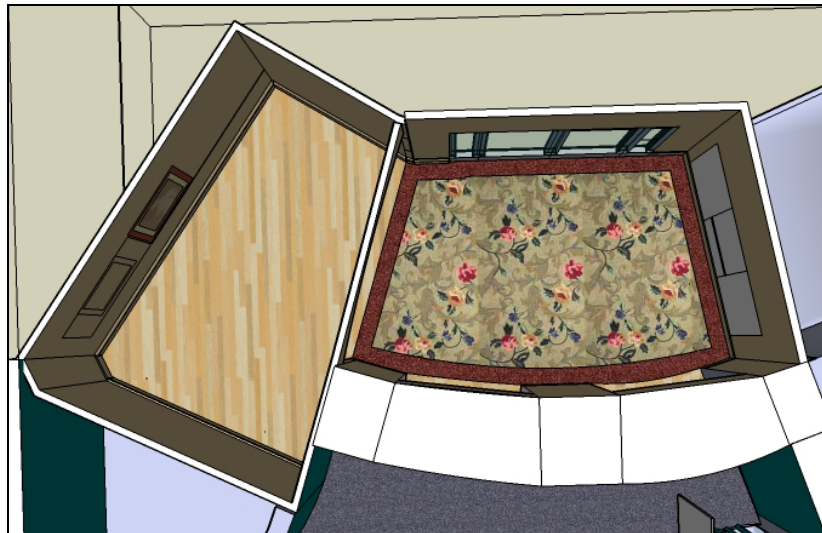


*Figure 5.20: Sketches of the exhibit space as period rooms*

The designer changed floor materials from tile and carpet to wood plank flooring in both rooms in order to visually unite the two rooms (the previous area that served as an exhibit case and original exhibit space) and to try to encourage visitors to stop and look at the exhibit. The designer also determined that a change to wood flooring, while more refined looking than the shiny red tile and gray carpet, still created a sense that the floor was slick and visitors would quickly pass through the space. To try and get visitors to “stick” in the exhibit, the designer placed patterned carpet and rugs on the floors.

First experimenting with area rugs, the designer selected a jacquard flower print as the central pattern with a solid dark burgundy border. The designer employed trial and error tactics to explore rug placement options within the exhibit. Due to the multiple

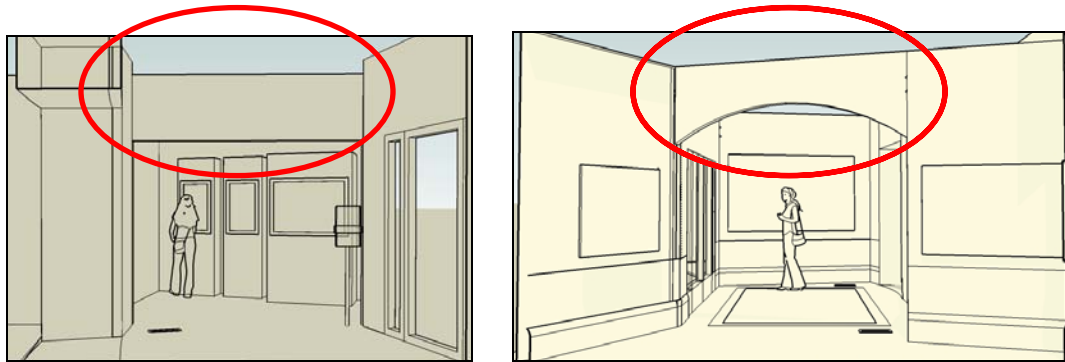
angles of the rooms, most area rugs looked out of place, causing the designer to opt for wall-to-wall carpet in the room that also served as an emergency exit corridor (Figure 5.21). The designer placed the rug in this location to soften the entrance to the exhibit and encourage visitors to slow down and look around. The designer wanted to keep the wood flooring in addition to the carpet to provide a contrast in flooring textures, reflective of the big idea of public versus private.



*Figure 5.21: Placement of wall-to-wall carpet within part of the exhibit space*

Another method considered by the designer for unifying the two rooms involved adding a decorative element on the ceiling between the two areas. The designer first manifested a simple six inch wide rectangular piece of sheet rock that covered wood framing two feet from the ceiling, running along the ceiling in the location of the previous exhibit case wall (Figure 5.22). This idea helped frame the entrance into the secondary exhibit space, formerly the exhibit case. It also served to create a sense of compression and release between the two spaces and provided a visual buffer between

the six inch change in ceiling heights. The designer further refined this soffit as a slight arch because it presented a more elegant, decorative entrance and allowed for structural elements to remain in the existing wall system.



**Figure 5.22:** Sketches of the rectangular (L) and arched (R) soffit between the two rooms within the exhibit

#### *Design Development Review: Peers and UNCG Faculty*

Peers and faculty suggested many items for further refinement in critiques of the design development stage, noting that color schemes and placement appeared haphazard, overwhelming, and disjointed (Appendix B). Though reviewers appreciated the duality theme, they suggested that the big idea of public versus private covered too broad of a scope and needed more focus. When addressing the look of a period room without reproducing an actual period room, reviewers noted the possibility of dividing the walls into three areas to represent the wall division similar to an early nineteenth century room: wainscoting, elaborate cornice, and baseboard. The designer understood this as a way to organize the location for text panels (wainscoting) and placement of lights (cornice). When applying color, reviewers suggested that the designer consider pulling different colors onto the walls such as light to darker tones on one wall. Post review the designer

contemplated putting plain panels behind the dress displays to make them stand out from the background paint color as reviewers noted the dresses disappeared in the dark red. The overall theme the designer took from the schematic design review was to remember that something obscure may be more inviting than the obvious show while making sure that the mystery uncovered was worth the exploration.

*Designer's Reflection: Peers and UNCG Faculty Comments*

Reflecting on this feedback the designer decided to reevaluate the big idea of public versus private by returning to her research on Dolley Madison. The designer also considered placement of paint colors to represent the division of walls in the early nineteenth century as it would aid in presenting the idea or essence of a period room without the expense of elaborate wainscoting, base board, and crown molding. Color placement in this manner would help to create a cohesive design. Employing the theories of learning through interaction with objects remained the primary focus, which brought the designer back to the notion of how to create interactive experiences with historically fragile objects.

*Design Development Review: Dr. Benjamin Filene*

Always keeping the big idea in mind when designing allowed the designer to be mindful that chosen artifacts and methods of display tell a story (Appendix C). Following this idea, everything the designer created needed to connect to an interpretive point. The big idea of public versus private brought up two additional questions; 1) what was it like to be a public figure as a woman in the 1800's, 2) how does the designer present the public view of Mrs. Madison and then reveal a private view behind it when



often the private view is unknown as they are her personal private thoughts. All images within the exhibit needed to relate to public and private aspects of Dolley Madison's life.

Some suggestions made by Dr. Filene included: consider other ways to present Dolley Madison to the public, educate people on Dolley Madison as the average person lacks knowledge of her, and further develop the duality of myth and truth behind Dolley Madison. Several ways the designer considered manifesting these suggestions included simplifying ideas currently developed and to use imagery and questions to entice visitors and cause them to read more within the exhibit. The designer realized that the scope of most of these ideas presented a problem of fitting them all in such a small space. For instance, the idea of recreating a dinner party for visitors' to act as guests at the Madison's does not work in the space, however it could happen on a smaller scale using one place setting instead of an entire table. Dr. Filene's suggestions caused the designer to rethink the story about Dolley Madison and the method of telling it.

*Designer's Reflection: Dr. Benjamin Filene's Comments*

Reflecting on this feedback the designer knew she needed to diligently focus on every aspect of the exhibit reflecting the big idea. She also contemplated continuing to look into dualities of Dolley Madison, but in a manner aimed more towards dispelling popular culture myths about her life and replacing them with actual facts. Furthermore, the suggestion to reinforce ideas both verbally and nonverbally stood out as something needing further consideration and perhaps implementation within the exhibit.

*Design Development Review: GHM Staff*

The designer met with staff from the Greensboro Historical Museum including: Registrar/ Curator of Costumes and Textiles, Susan Webster; Curator of Education, Betty K. Phipps; Curator of Exhibits, Martin Kane; and Assistant Curator of Exhibits, Adrienne Garwood. Comments at this stage focused strongly on the big idea of Dolley Madison and her extraordinary accomplishments as well as other ways to tell Mrs. Madison's story, including how Dolley Madison is represented through the idea of public versus private, focusing on her Quaker beginnings, and how Dolley Madison interpreted her own life (Appendix D). A large part of the discussion focused on reproduction artifacts versus original pieces. The validity of using both was discussed looking at authenticity and how this affects the experience visitors receive. A recommendation where reproduction seemed appropriate was the Latrobe chair, of which no original piece exists. Discussion of creating a period room led to the idea of creating a false reality. The question arose of "how can a reproduction period room provide beneficial information without blurring the intent of the big idea?" Ultimately the discussions led to the idea of compromising by creating a room with a period feeling that would incorporate ideas from Dolley Madison's time as well as current popular culture.

*Designer's Reflection: GHM Staff Comments*

After this meeting the designer considered many new options such as whether to use authentic or reproduction pieces. Deciding this was more of a personal choice for each designer rather than a museum standard, the designer chose to consider the use of authentic pieces in situations where the actual piece served to educate visitors and stood

alone. In the Dolley Madison exhibit, the designer asserted that reproduction pieces helped provide visual references to early nineteenth century styles, while the exhibit as a whole primarily served the public through the display of artifacts. Final reflection on this feedback led to the design refinement stage where the designer attempted to create the essence of a period room.

### **Design Refinement**

Schematic Design 6 weeks	Design Development 7 weeks	Design Refinement 3 weeks	Post Design Analysis 2 weeks
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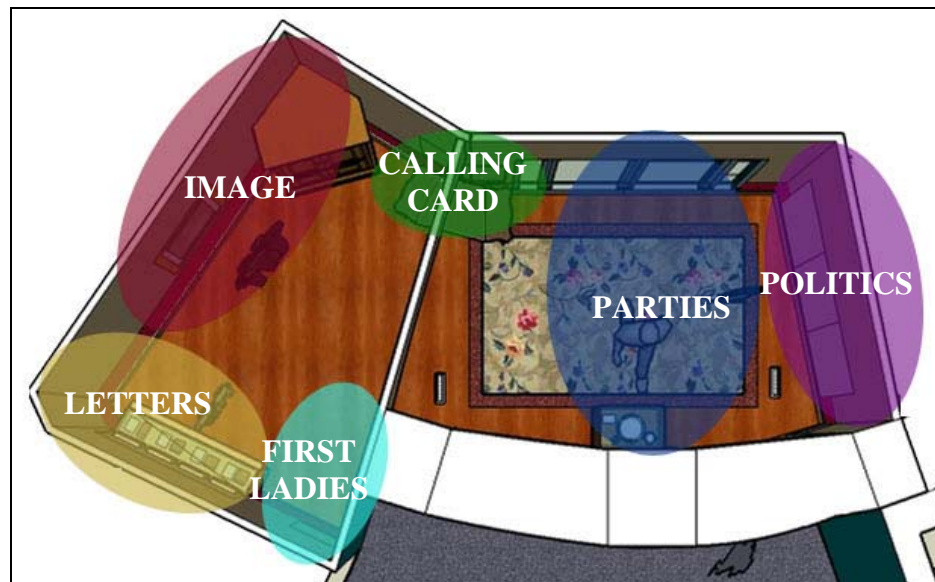
In this stage the designer implemented the overall themes and organization with a specific focus on details and manifesting the design. This included focusing on finalizing and implementing the big idea, working out details through drawings and illustrations, focusing on space planning and lighting, developing graphic panels, as well as creating a specifications and budget sheet. Implementation of all of these elements aided the designer in creating a complete exhibit.

#### *Big Idea*

Developing the idea of “Extraordinary Accomplishments: Power and the Party Planner” came from discussing several iterations of ideas with Dr. Filene that served as catch phrases to draw people in and give them an overall understanding of the exhibit. These ideas developed from the designer referring back to earlier research on Dolley Madison and narrowing the focus from Mrs. Madison’s life in Washington, D.C. to her stint as First Lady. The educational goals remained to teach people about Dolley Madison and dispel the myths about her as a woman mainly known from her image and

name on modern snack cakes and ice-cream, not as a First Lady. Using this idea, different sections within the exhibit presented an extraordinary accomplishment of Dolley Madison in the areas of politics, parties and social events, calling cards, image, letters, and as a First Lady. The goal of presenting Mrs. Madison on these topics served to dispel misguided notions people held of the former First Lady while educating them on her significant role in American history.

In the final refinement, the designer organized the layout into thematic zones that each fit under the overarching big idea. The designer narrowed this concept from a broad view of Mrs. Madison's entire life to a focused view looking at the years she spent as First Lady. Within this view the following aspects of her life stood out; the differing roles of men and women in politics, social events, social networking vis-a-vis making social calls in the 1800's, image, letters and correspondence, and a comparative look at other important First Ladies (Figure 5.23).



*Figure 5.23: Plan of exhibit space showing space planning diagram*

## *Politics*

In the area of politics, Mrs. Madison differed from women of her day in that her husband communicated with her and kept her informed of current political events and discussions. At that time, a woman's role centered on the domestic sphere, childbearing, keeping house, meal planning, cooking, and attending social events. By discussing political matters with his wife, calling her by pet names, and relating to her as an equal Mr. Madison pushed the boundaries of social practices in the early nineteenth century (Allgor, 2006, 143). The designer demonstrated this through one text panel measuring 7'W x 4'H showing the difference in how women and men politicked in the early nineteenth century (Figure 5.24). As described in the text and reinforced with images, women politicked through social gatherings and calling on one another at their homes, while men politicked through speeches at podiums, wars, and discussions at social gatherings (Appendix E). Within the exhibit, information comparing Mr. and Mrs. Madison's and politicking styles flanked five central images of Washington, D.C. in the early nineteenth century (Appendix F). These images aided in giving visitors a visual marker of the environment in which the Madisons lived and worked alongside the accompanying text. The combination provided visual and written strength to the big idea: a direct visual contrast between Mr. and Mrs. Madison and the tools they used to politic set against the backdrop of a young and unrefined capitol city provide evidence of the obstacles Mrs. Madison overcame to achieve great things politically and personally.

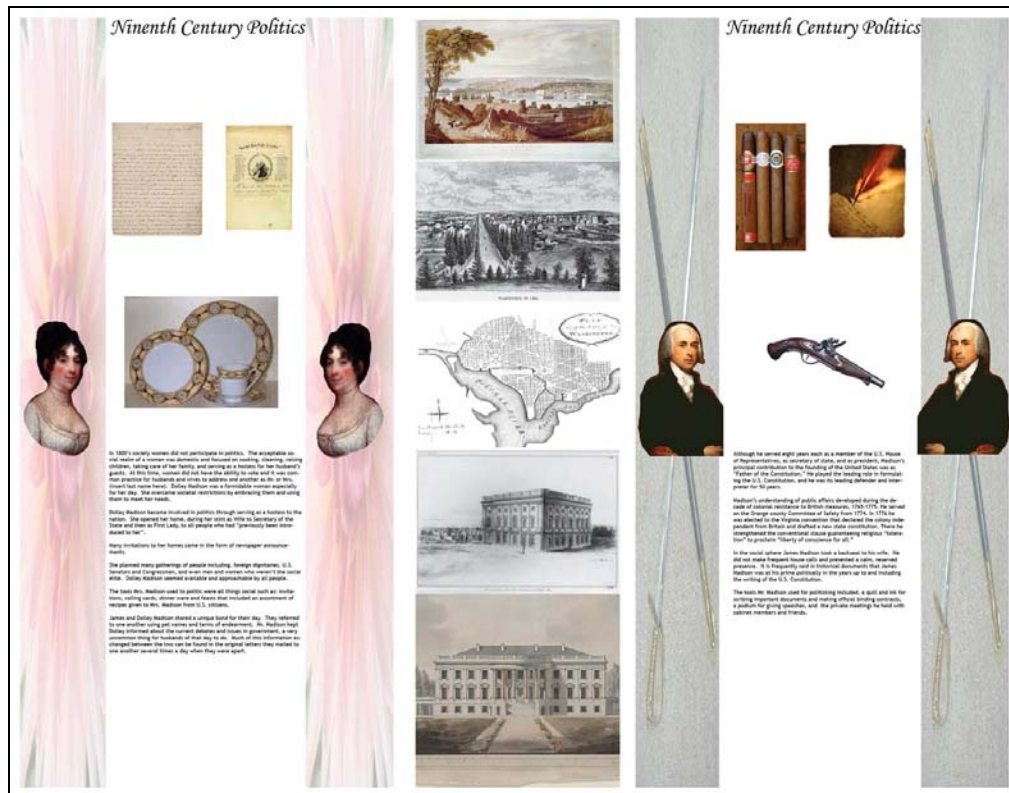


Figure 5.24: Graphic panels of Mr. and Mrs. Madison and the ways men and women politic

## Parties

Another result from Mr. Madison treating his wife as an equal appeared through their social presence. At dinner parties where the man traditionally was the focus of the party, Mr. Madison stepped back, as was his timid nature, and Mrs. Madison stepped into the limelight (Allgor, 2006). Parties served as the stage for Mrs. Madison to work social magic by bringing people from all classes, both political parties, and both sexes together. The designer implemented this idea in the exhibit by installing a three-dimensional holographic projector that produced a three-dimensional image of Dolley Madison that visually greeted visitors as they entered the space. The use of a translucent image of

Henry Sargent's painting *The Dinner Party*, displayed behind the hologram on the glass doors leading into the Jug Town exhibit further reinforced this idea (Figure 5.25). As a change from earlier phases of design, the designer changed the image from Dolley Madison to *The Dinner Party*, thus setting the theme of Mrs. Madison as a hostess, while also providing a reason for visitors to pause and look at the exhibit. Artifacts accompanying these images and theme included a place setting from the Madison's original china collection displayed in a glass exhibit case.



**Figure 5.25:** Henry Sargents “*The Dinner Party*” Image:  
<http://cgfa.sunsite.dk/s/p-hsargen1.htm>

### *Image*

Early research continually resurfaced as the designer considered new ideas and design modifications. Reflecting back on this research, the designer recalled reading about the importance of image in the early nineteenth century and how image influenced people just as strongly as social events. “The people of the time took face-reading

seriously, believing that the lineaments of a person's visage would reveal his or her character, whether it was one of heroic strength or of secret depravity" (Allgor, 100-101). Paintings provided the only way for people to know what their leaders looked like and study their faces, aside from seeing them in person (Figure 5.26). This knowledge as well as reading many quotes that described not only Dolley Madison's appearance but how she carried and presented herself demonstrated the importance of image and the need to incorporate the role image played in the early nineteenth century.



*Figure 5.26: Framed Gilbert Stuart portrait of Dolly Madison shows her image to the public*

Mrs. Madison had a knack for knowing her audience and what they needed from her. In this sense her conservative Quaker background yielded modest yet elegant attire that helped her seem approachable to all people, not just the upper class. Her ideas of image for the fledgling nation were expressed as she worked with architect Henry



Latrobe to design the White House, outfitting it with all American-made furniture and décor, and establishing an icon for the new nation. This was important insight as many Americans still harbored harsh feelings towards Europe and any implications that America was trying to imitate European ideals and government. The designer used knowledge of American feelings towards Europe in developing the exhibit, however, due to space limitations, the presentation of these ideas to the public needed to appear in an additional source such as a handout or through the museum website.

### *Armoire*

Clothing represented one form of Dolley Madison's image as her style of fashionable dress remained conservative. In the design development stage, the designer explored options for presenting the dresses on forms in glass cases surrounded by curtains. Space limitations and Americans with Disabilities Act (ADA) requirements prevented showing two dresses at a time due to multiple attempts at placing the cases in the exhibit providing inadequate space for a wheel chair to turn around. As the designer moved away from the idea of presenting everything in frames, a need for a new method of presenting the dresses that protected them and allowed for visitor interaction emerged.

While contemplating means to present the dresses, the designer investigated methods of clothes storage used during the early nineteenth century, and this exploration led to using an armoire (Figure 5.27). In the design, the armoire served two purposes for the dress: protection, through limiting light exposure by keeping the dress behind the closed armoire doors, and presentation, only briefly exposing the dress to light when visitors opened the doors and activated the motion sensor lights within. Under this

scenario, a pane of UV protective glass installed behind the armoire doors provided additional protection from physical contact by visitors and excess light from outside the armoire.



*Figure 5.27: Detailed drawing of the armoire (L), and the armoire on display in the exhibit (R)*

In order to fit a dress into the armoire on a mannequin form, the designer created a custom armoire with similar decorative qualities as a period armoire. Using a custom-made armoire prevented damage from occurring to a period piece of furniture. A thirty-two inch diameter was necessary for presenting the dress on a form that also allowed for the dress to rotate fully. The necessary depth of the armoire presented one concern for the designer, placement within the exhibit in order to prevent the armoire from obstructing visitor's paths. The designer resolved this issue by placing the armoire into one corner of the exhibit space. One complication addressed by the designer involved allowing the showcased dress to rotate, while preventing the train from catching in the moving parts. The designer developed two solutions: 1) draping the train over the arm of

the mannequin form, and 2) placing a three inch high plastic rim around the edge of the rotating platform separating the dress from the moving parts. A combination of these methods seemed the most effective way to ensure the artifacts safety.

As suggested by the designer, interaction with the armoire occurred when visitors, upon reading instructions on a small label outside the armoire, opened the doors, a light turned on, and the dress slowly began to rotate. The designer implemented the rotating feature to allow visitors to see all sides and details of the dress from one position. In this scheme, a small text panel provided a brief description of the artifact, materials used in construction, and suggested events when Mrs. Madison wore it.

#### *Calling Cards and Letters*

Calling cards and letters showed Dolley Madison's personal side and actual thoughts; creating a first hand connection to her thoughts and feelings while showing how much she cared about the people in her life. The importance of family and loved ones resonated through the letters while calling cards demonstrated the importance of social practices and etiquette. Both items demonstrated the power women wielded through parlor discussions and social relationships.

The calling card interactive consisted of an end table set beside the glass doors and custom fit to bend around the walls between the two rooms with a text panel above (Appendix G). The bending served as a visual method to join the two rooms by physically joining the two areas with a display case and information relating to calling cards. The designer deemed it appropriate to place the calling card interactive by the door leading into the Jug Town exhibit as it simulated the traditional placement of a table

by the front door to a home, where visitors placed calling cards in the early nineteenth century. By wrapping the artifact display case around the wall, the designer attempted to lead visitors from one display to the next within the Dolley Madison gallery (Figure 5.28).



*Figure 5.28: Calling card interactive located beside the entrance to the Jug Town exhibit*

On display and inset in the top of the end table, a glass display case contained Dolley Madison's personal ivory calling card case as well as several original calling cards. Next to them, a touch screen computer allowed visitors an opportunity to create their own calling card, provide their e-mail address to the museum, and then receive an email at home with a copy of their calling card and a link to the GHM website. After opening this email and being called on by Dolley Madison electronically, visitors received an opportunity to follow the link to the museum's site and obtain more detailed information about Mrs. Madison, the exhibit, and other exhibits at the museum (Figure 5.29).



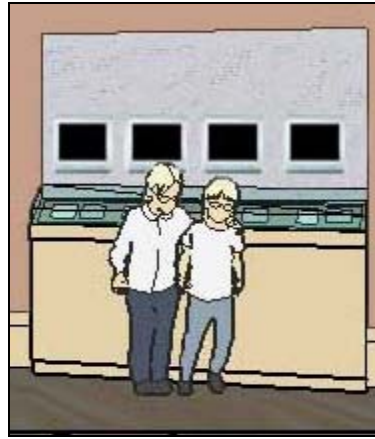
**Figure 5.29:** Images of the three main pages of the interactive calling card computer experience. The first screen provides visitors with access to create their own calling card, the second screen allows them to pick their calling card design, and the third screen allows them to type their name on their calling card.

Placing the artifacts beside a computer provided a modern comparison of how people call on one another today while also allowing the designer to implement the discovery and stimulus-response styles of learning. The visitor discovers the interactive touch-screen next to the actual artifacts and creates their own calling card. The computer screen provides the stimulus and the changing screens, email, and ability to print their own calling card provides visitors with a response.

The designer developed the letter interactive to provide an interactive and somewhat personal experience for the individual visitor using discovery, stimulus-response, and constructivist learning. Significant changes in the method of presenting the

letters occurred between design development and design refinement stages due to the designer wanting a more cohesive appearance to all of the interactive displays, as well as the desire to protect the artifacts and still provide an interactive experience.

Moving forward, the designer employed expository-didactic learning when presenting the original letters in a glass display case beside typeset versions of the same letter, all presented at the same height (Figure 5.30). The typeset versions provided the visitors with an easy to read reference in case they had difficulty reading Mrs. Madison's handwriting. The designer picked three primary topics of focus displayed through letters: 1) politics, seen through correspondence between Mr. and Mrs. Madison; 2) image, seen through two letters one that describes the 1814 White House fire and a second group of correspondence between Mrs. Madison and architect Henry Latrobe as they discussed plans for the White House, and 3) personal ties, letters between her and her family showing her strong connection and need for them. Reflecting on stimulus-response learning, the designer placed four sets of headphones as well as four buttons in front of each of the four letters. The buttons provided the same video and audio experience in front of each letter. Once pressed, the buttons activated the screen directly above the selected letter and showed a reenactment of the topic of the letter. For instance if a visitor selected the 1814 fire, they would hear an audio clip of someone reading the letter, while on screen in front of them, people acted out the described events. Providing additional historic commentary at the end of each letter reading gave visitor's a broad understanding of events surrounding the topic of the letters.



*Figure 5.30: Letter interactive*

### *First Ladies*

The designer strove to present Dolley Madison as a woman whose legacy as a hostess and extraordinary First Lady influenced people today. Demonstrating this as a comparison between Mrs. Madison and a few First Ladies seemed the best option because people seem able to more easily identify with current events than events of which they have no memory. Exploring several iterations of this graphic panel, the designer first considered which First Ladies to compare and how to show similarities between each of them and Mrs. Madison. Deciding upon First Ladies came down to who stood out in current history to the designer and the designer's peers. By comparing familiar First Ladies to one that is remembered as a snack cake, the importance of Mrs. Madison's role in shaping the position of First Lady and setting a standard became apparent. The designer selected three First Ladies, Eleanor Roosevelt, as a first wave feminist and founder of the United Nations, Jacqueline Kennedy, for her promotion of a First Lady image, the White House, and historic structures across America, and Hillary

Clinton, because of similar extraordinary accomplishments in policy making and politics when compared to Mrs. Madison.

Applying the learning theory of constructivism, the designer developed a graphic image to show this comparison quickly with an idea to have one large text panel with Dolley Madison's image and information across the top. Below this, information about the selected First Ladies showed a direct comparison of accomplishments, such as both Jacqueline Kenney and Dolley Madison redesigning the White House. The designer debated whether this representation served all the First Ladies well, or if placing Dolley Madison's image over theirs diminished each individual's accomplishments. It quickly became apparent that visually this method of display did not work as the ratio of space for Mrs. Madison's information compared to the other three ladies seemed unbalanced. The designer decided to change the layout to four separate panels that equally represented all four First Ladies (Figure 5.31). This gave visitors a chance to quickly glance over, or read in their entirety, accomplishments of each First Lady and, upon seeing Mrs. Madison's panel, understand how they all made significant contributions while holding that position (Appendix H).





**Figure 5.31:** First Ladies text panels in order left to right, Dolley Madison, Eleanor Roosevelt, Jacqueline Kennedy, and Hillary Clinton

### *Cohesive Design*

At this stage, the designer decided upon flooring materials, which included dark honey glazed wood plank flooring with a period looking area rug in the main corridor. The wood unified the two rooms by providing one material found throughout, while the rug provided a soft transition into the exhibit while reducing noise from visitor footsteps. The designer picked the floral pattern on the rug from a nineteenth century jacquard pattern and used it to serve as a subtle way to set the mood for that period. In order to prevent the rug from lifting up and tripping visitors, the designer recessed it into the wood to provide a level surface. The designer contemplated drawbacks to using these materials, including the rug provides a soft sound buffer while the wood produces sound with each visitor's footstep, the rug will require cleaning at intervals, and the wood will be scratched with regular use.

Creating a decorative transition between the flooring and the walls, the designer placed an eight inch decorative baseboard molding around both rooms, visually linking the two areas. Each display case imitated this decorative feature through lines at the same height as the molding along each base. This reflects back to earlier ideas in the schematic design stage where the designer considered using color placement on the walls to create a visual datum line throughout the exhibit. Knowledge of necessary features for a successful cohesive design helped the designer further develop the exhibit through the use of graphic panels.

### *Graphic Panels*

The designer planned carefully as she developed the graphic panels found around the exhibit; politics, calling card, First Ladies, and letter interactive. Due to the diversity of the subject matter, the designer realized the importance of creating unified graphic elements. This unification occurred through the development of layout, levels of information, use of color, and visual cues linking the graphics within the exhibit. To visually unify the panels the designer used dominantly vertical graphics, the color pink, the image of a dahlia, and the inclusion of a modified magnolia drawn by Henry Latrobe for use in the White House. These features aided visitors by making it easier for them to understand how to interpret information on each panel.

When considering layout, the designer decided to orient the graphics vertically to maximize use of limited wall space and to quickly present comparisons of subject matter. For instance, in the politics panels, information presented side by side, women on one side men on the other, on vertical panels allowed visitors to stand in one spot and quickly

see comparisons in methods of politicking in the early nineteenth century through graphics and text. Text placement followed museum standards as the designer placed the text panels between three feet and five feet above the finished floor to allow visitors in a range of heights to access the text easily. Placement of text at this height created a visual line around the exhibit where visitors received information.

The designer determined the level of information presented based on knowledge that the average visitor reads only a few seconds of information from each text panel, and the rare visitor reads every word (Serrell, 1996). Understanding this, it was important to provide enough information to appease each type of visitor. The designer presented the information through quick phrases summarizing each panel, followed by detailed information for visitors interested in learning more and highlighted with images and captions that reinforced the ideas described.

The designer picked the thirty-six point Arial font for its readability and used the color pink and a dahlia to accent the text based on the common notion in American culture of flowers and the color pink representing females. The feminine motif represented in the graphics reflected back on the subject matter of Dolley Madison. Altering Henry Latrobe's magnolia from its original brown toned sketch, the designer changed it to a pink linear element and used it to distinguish the text on each panel by placing the flower at the four corners of each block of text (Figure 5.32). The use of all of these elements together; layout, levels of information, color, and visual cues linking the graphics, helped the designer create a unified graphic presentation.



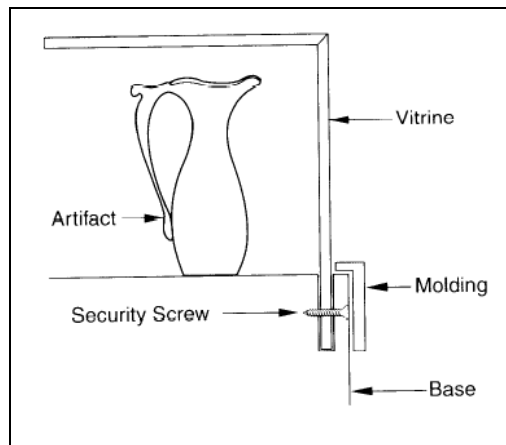
*Figure 5.32: Original (L) and modified (R) Henry Latrobe magnolia used on all graphics*

### *Display Cases*

The designer developed a visual datum line in the schematic design phase and used it through all phases of design including the development of display cases. The three display cases consisted of the dinnerware exhibit, the calling card exhibit, and letter exhibit (Figure 5.33). The designer chose to construct these three display cases from wood, glass, and metal screws and hardware. In designing the cases, the designer followed museum standards for displaying artifacts safely and keeping them protected from vandalism, theft, and reducing environmental wear (Figure 5.34) (Thomson, 1986, Maekawa, 1998, Ogden, 1999). Considering unification of the dinnerware and letter display cases, the designer implemented similar design elements; recessed toe kicks and decorative linear elements carved into the wood proportional to the decorative baseboard molding around the room. The designer designed all display cases so that visitors viewed the artifacts contained within on a three foot high enclosed platform. Throughout the design process, the designer maintained that all information including text, interactive experiences, and placement of artifacts the visitor encountered occurred between three and five feet above the finished floor.



*Figure 5.33: Dinnerware display case*



*Figure 5.34: Section detailing display case construction*

### *Lighting*

Within the exhibit, the designer considered lights that emitted low levels of heat as well as low levels of harmful rays, such as Ultra Violet rays, that damage artifacts.

Researching museum lighting, the designer discovered the museum quality Pegasus

brand with 60 watt (MR16) low voltage (12 volt) UFO cable lights (Figure 5.35). The design of the lights allowed the designer to aim the light almost anywhere, a very beneficial quality within the museum setting. The designer specified these lights because their low heat, long life, and adjustable use made these lights best suited overall lighting in the exhibit as well as concentrated spot lights on each display and text panel. The designer also specified lighting fixtures, hung from the ceiling above thin gauzy synthetic fabric to create a diffused light throughout the space. The fabric served to filter and soften the light without dimming too much light and hindering navigation within the space.



*Figure 5.35: Pegasus UFO cable light*

### *Specifications and Budget*

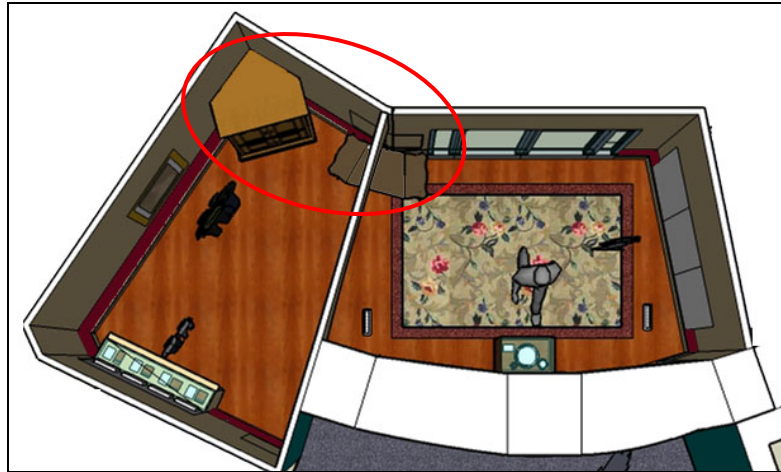
Though designers often constrain their designs based upon a set budget, the designer freed the design from the restrictions of a budget allowing a wide range for design creativity. Development of a budget and specifications occurred towards the end of the design process to account for all elements of the design including paint, the holographic projector, materials for constructing the display cases, lights, and all

materials to make and mount the graphic panels. A specification and budget sheet lists all materials, vendors, and costs for the design, providing the client with an itemized list of expenditures (Appendix I).

*Design Refinement Review: Peers and UNCG Faculty*

After presenting to peers and UNCG faculty, the designer requested feedback on the success of implementing the big idea throughout the exhibit. Reviewers strayed from this area of commentary and focused on color choices and application, and the period look of pieces of furniture in the exhibit. Reviewers characterized color choices and placement as haphazard and distracting, noting further need to refine these choices as a means to unify the design.

Much discussion ensued over the designer's choice to use an early nineteenth century reproduction armoire and end table, especially concerning the designer's decision to alter the two pieces to custom fit them into the exhibit space. The designer proposed to alter the armoire by changing the shape of the back of the piece to custom fit it into a corner in the exhibit space, providing more room for the mechanics to make the dress rotate (Figure 5.36). The designer re-designed the end table, bending it around a 215° corner of two adjoining walls in the exhibit (Figure 5.36). Reviewers preferred that the designer rework these ideas so to avoid redesigning the armoire and end table.



*Figure 5.36: Altered armoire and end table.*

Comments on the overall look of the exhibit focused on material selection and application. The reviewers focused on the use of different types of wood for the display cases, the armoire, and the calling card table, suggesting that the designer use similar wood in all the pieces to unify the design and help create visual cohesion between the two rooms. Reviewers also mentioned choice of flooring materials noting that the placement of the wall-to-wall rug in one space and wood flooring in the other caused the spaces to look like separate rooms. Overall, the designer needed to work on developing a more cohesive design.

#### *Designer's Reflection on Design Refinement Review*

The designer considered all commentary from the design development review in moving forward. She changed the color scheme on the walls to a more uniform buttery yellow with a dark red band along the bottom of each wall, and picked a uniform wood for all display cases. The designer decided to leave the period looking armoire and end table alone as they served as stylized visual links to the early nineteenth century. In



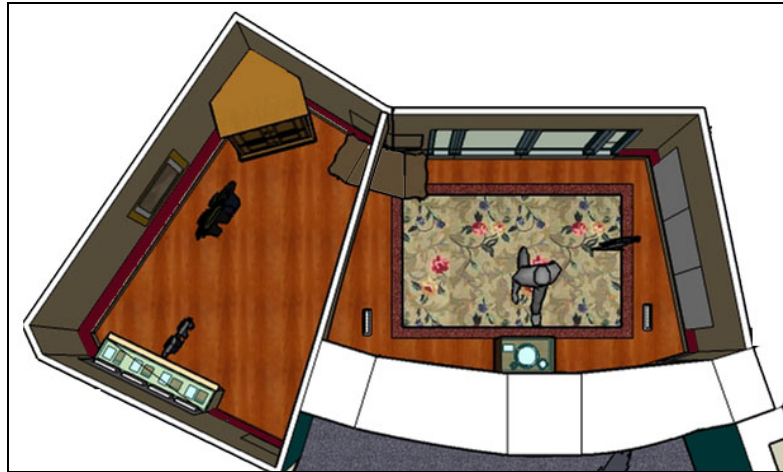
regard to flooring materials, she removed the wall-to-wall carpet and replaced it with an area rug with a similar pattern, and changed the wood flooring to a darker wood color (Figures 5.37-5.41). These changes provided a visual unity to the exhibit through cohesive materials, color scheme and application, and actual lines of red paint linking the rooms visually.



*Figure 5.37: Section looking into second floor lobby*



*Figure 5.38: Section looking into Jug Town exhibit*



*Figure 5.39: Plan view of exhibit space*



*Figure 5.40: Section looking towards politics graphic panels*



*Figure 5.41: Section looking towards armoire and letter interactive*

### Post Design Analysis

Schematic Design 6 weeks	Design Development 7 weeks	Design Refinement 3 weeks	Post Design Analysis 2 weeks
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In order to obtain non-experimental data from the design, the researcher developed a questionnaire and collected specific feedback from three focus groups (Appendix J). Prior to fielding the questionnaire, the designer presented the exhibit design via Power Point to the three focus groups, and collected their verbal and written feedback. The designer analyzed data by aligning topics, learning theories and comments and implementing a common-sense review (Appendix K). The focus groups represented three facets of the museum world: design professionals, museum professionals, and an academic expert in history. The researcher kept the focus groups separate to allow for broader, unbiased feedback, as the designer observed that often one person's commentary in a review swayed all the commentary for that review in one direction. Critiques, while beneficial, neglected to provide feedback on specific areas where the designer expected and desired responses. The designer therefore created a questionnaire and obtained focused feedback on specific areas of design, preservation, and the effectiveness of communicating the big idea.

#### *Focus Groups*

The focus groups consisted of design professionals: Patrick Lee Lucas, Assistant Professor, Department of Interior Architecture, Jo Ramsay Leimenstoll, Professor, Department of Interior Architecture, and Novem Mason, Professor, Department of Interior Architecture; a historian: Dr. Benjamin Filene, Associate Professor and Director

of Public History Department, and museum professionals; Adrienne Garwood, Assistant Curator of Exhibits, Susan Webster, Registrar and Curator of Costumes and Textiles, and Betty K. Phipps, Curator of Education.

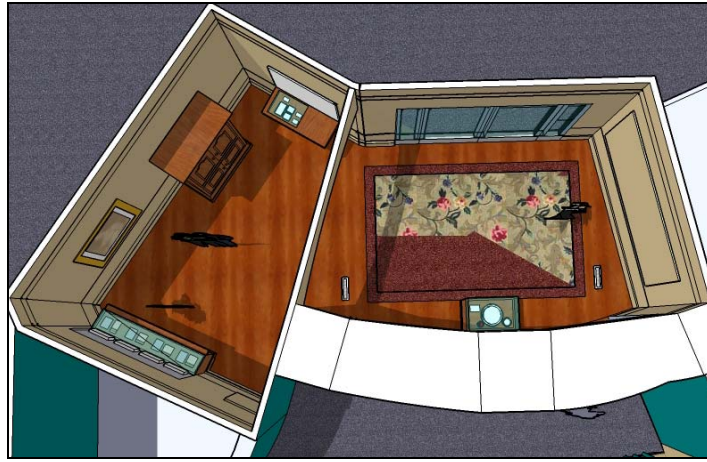
### *Design Professionals*

The first focus group, design professionals, differed from the second and third in that their questionnaire included questions for the hologram and they viewed different images of the completed exhibit presented by the designer (Figures 5.37-5.41). Design professionals provided feedback through similar questionnaires (Appendix L) after seeing a Power Point presentation (Appendix M).

The meeting unfolded casually as participants asked questions and made comments throughout the presentation. The majority of this constructive feedback focused on issues not addressed by the designer such as construction and mounting of text panels, as well as providing suggestions for changes. Towards the conclusion of the meeting the design professionals requested implementation of design modifications suggested during the presentation including use of similar wood for all display cases, adding a red stripe slightly below the ceiling to circumscribe the room, moving the armoire, adjusting the text height of the politics panels, adjusting the baseboard color, and redesigning the calling card display case. If implemented as suggested, these changes would improve the visual cohesion of the exhibit by visually uniting the space through materials and color.

*Designer's Reflection on Post Design Analysis: Design Professionals*

Upon concluding the meeting, the designer began implementing the alterations suggested by the design professionals. This began with the application of a red stripe around the ceiling to help balance the large red stripe running above the baseboard as well as the application of a darker yellow shade to the baseboard. Modifications to the calling card interactive included removing the end table and replacing it with a simple wooden shelf that held the thin calling card case and calling cards, as well as contained a thin touch screen computer. The designer changed the wood on all display cases and the armoire to a matching cherry, just a shade darker than the honey colored wood floors. She also moved the armoire out from the corner location and against the longest wall in the exhibit space. This provided more space for the calling card interactive to exist within one room, instead of wrapping between two. In redesigning the calling card interactive, the designer inset the touch screen computer into the angled wooden shelf, allowing an unobstructed view of the text panel above the shelf. Finally the designer shortened the politics text panel to make it a similar scale to the other text panels around the room (Figures 5.42-5.46).



*Figure 5.42: Plan view of updated exhibit space*



*Figure 5.43: Section looking into Jug Town exhibit*



*Figure 5.44: Section looking into second floor balcony overlooking the lobby*



*Figure 5.45: Section showing calling card (L) politics panels (Center), and First Ladies (R)*



*Figure 5.46: Section showing armoire (Center) and letter interactive (L)*

### *Museum Professionals*

The meeting with museum professionals followed a similar format as the design professionals in that they received their questionnaires, viewed a Power Point presentation, and provided feedback and asked questions throughout the process. This meeting produced both written and verbal commentary that primarily focused on museum standards, accessibility for multiple visitors, amount of text and text placement, cohesion of graphic panels to one another, and limitations and successes of the design elements

(Appendix N). For instance the calling card interactive provides quick and easy access to museum visitors email addresses and allows the museum to use this information to contact guests in the future, however a tour group of four to twelve people would not be able to access this interactive at once. Implementing more computers could allow greater numbers of people to interact at once.

#### *Designer's Reflection on Post Design Analysis: Museum Professionals*

The museum professionals' comments provide a focused look at the application of museum practices to the Dolley Madison exhibit. Upon reviewing this feedback, the designer realized the need to edit all text panels to condense the information presented to a format that visitor's could quickly read and obtain the big idea of each display. Commentary revealed that the museum professionals wished to receive complete documentation of the exhibit design process including: written text, a bibliography, and explicit drawings and descriptions of each area of the exhibit. The designer decided not to provide this detailed information due to a request by the museum professionals to limit the presentation to one hour. Overall the feedback provided by this group can be used broadly to develop future museum exhibits.

#### *Director of Public History*

The third and final meeting with Dr. Benjamin Filene unfolded in much the same way as the museum professionals meeting in that he received a questionnaire, viewed and heard a Power Point presentation, and asked questions and provided comments throughout. The majority of comments appear as written feedback on his questionnaire



(Appendix M). This meeting focused on the big idea and implementation of the big idea throughout the exhibit.

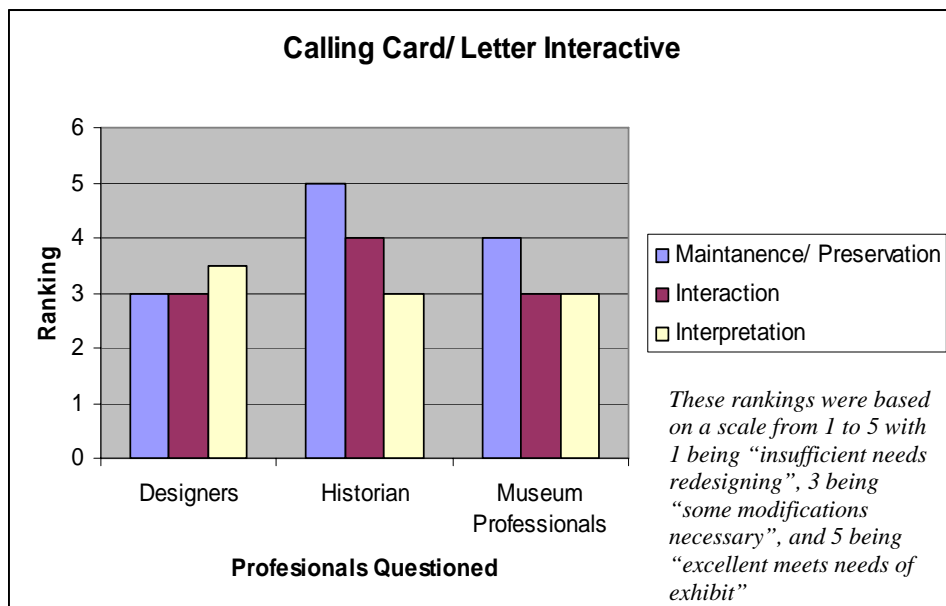
#### *Designer's Reflection on Questionnaire Responses*

A summary of these data show the primary areas of focus for each group; design professionals focused on design issues, museum professionals focused on museum standards such as text length and height, and the Director of Public History looked both at the big idea and museum standards (Appendix O). These areas of focus developed without influence from the researcher.

#### *Calling Card and Letter Computer Interactive*

Reviewing the frequency of the data gathered on the calling card and letter computer interactives, the designer determined that overall she provided adequate maintenance as well as an opportunity for the museum to collect visitor email addresses for future correspondence or development activities. Both the letters and calling card interactives were intended to represent feminine social power, though one interviewee questioned whether or not the videos for the letter interactive presented the idea of power. All groups of reviewers expressed that materials, light and color helped draw visitors to the displays while unifying the exhibit, however the text length needs to be shortened. The theories of learning represented in the calling card and letter interactives included all four types: all three groups said stimulus-response (direct interaction with the interfaces); two groups said expository-didactic (linear organization of information), all three groups listed discovery (visitor's explored the interactives), and all three groups found constructivism present (questions visitors most likely would ask of each other, docents,

and seek answers to within the exhibit). Overall the calling card and letter interactives ranked average to above average scoring 4 out of a possible 5 for maintenance, 3.3 for interactives, and a 3.17 for interpretation (Figure 5.47). These rankings were based on a scale of 5 with 1 being “insufficient needs redesigning”, 3 being “some modifications necessary”, and 5 being “excellent meets needs of exhibit.” Overall the maintenance of the calling card and letter interactive exhibits scored well as a result of using computer based interfaces that referenced nearby artifacts encased in glass. Interaction and interpretation received scores slightly above average, but could have improved with the addition of more computers for visitors to access, as well as providing opportunities for visitors to seek answers to questions related to the artifacts on the computer screens.



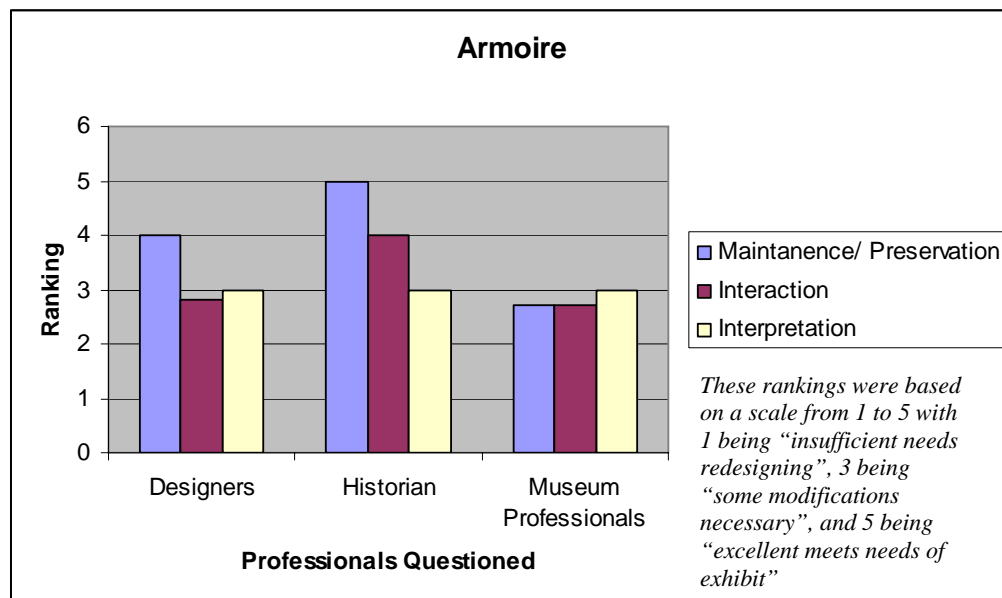
**Figure 5.47:** Ranking of the Calling Card and Letter Interactive Exhibits.

### *Armoire*

Data on the armoire interactive reflected the opinions that the exhibit provided adequate preservation for the dress from light damage, however the museum professionals questioned if the armoire provided enough space for the dress, and if rotating was safe for the dress. In communicating the big idea, the armoire successfully showed how women are seen as well as Mrs. Madison's style. Several reviewers addressed the need for text explaining the significance of the dress and how it shows power. Reviewers questioned how materials, light, and color show power, but responded that the designer used lighting well to reveal the dress. Reviewers recommended that the designer consider using motion detectors and automatic mechanized closing doors on the armoire to aid in protecting the dress. Addressing learning theories, all three groups listed stimulus-response (exhibit lighting up and spinning when the visitor opens the armoire doors), all three groups noted discovery theory present (visitors reveal the dress), two groups reported constructivism present, and one group recognized expository-didactic learning. When ranking the armoire exhibit overall, reviewers' ranked preservation as 3.9, interactives as 3.17, and interpretation as 3 (Figure 5.48).

Though the armoire received average to above average overall rankings figure 5.48 shows that the three focus groups provided a wide range of responses. These results greatest variance occurs between the historian and museum professionals in regard to preservation. These results developed from the museum professionals questioning the safety of the dress on a spinning platform, while the historian, having seen this

implemented in a previous museum, knew this design safely protected and presented the dress. A slight difference in opinion on the success of interaction of the armoire resulted from the focus groups questioning the ability of the armoire to reset to a closed position and visitors knowing to open the closed armoire.



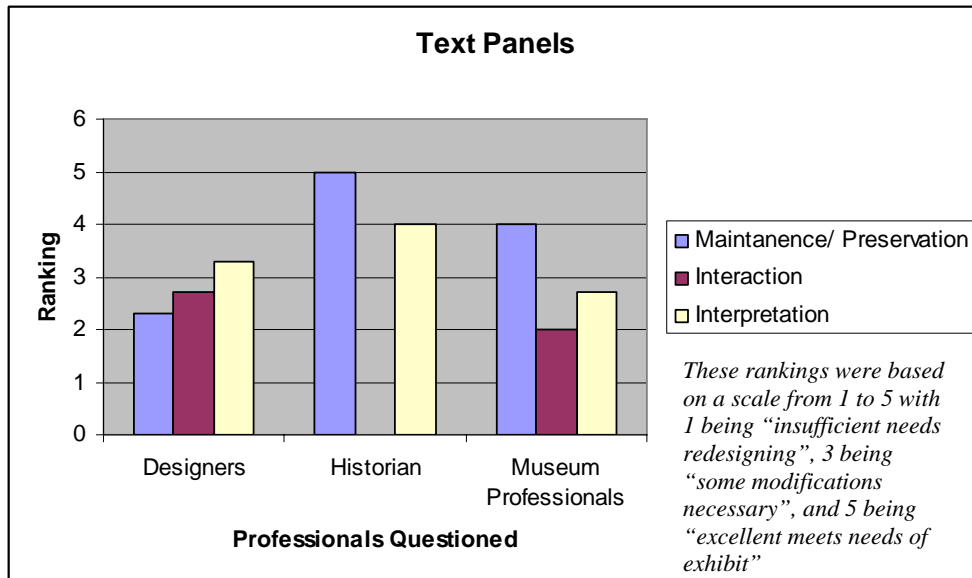
**Figure 5.48:** *Ranking of Armoire Exhibit.*

### *Text Panels*

Questions regarding the text panels produced varied responses among reviewers as they provided differing opinions on preservation of the text panels. The design professionals said they were not adequately preserved (mean score of 2.3), while the public history director said they were (score of 5). The museum professionals provided recommendations for using exhibit grade finishes on the panels. Reviewers could not assess the big idea as presented through written text due to the designer not providing the text for them to read based on time limitations. Overall the text panels visually showed

the big idea as a link between men and women on the politics panel and power of First Ladies. Addressing materials, light and color represented in the text panels, reviewers expressed a need for lighting represented in the images presented to them, questioned how pink represents power, and complimented the use of the Latrobe flower. Learning theories identified within the text panels by reviewers include: expository-didactic listed by all three groups, discovery theory recognized by two groups (visitors discover the text and information revealed), and the design professionals reported some constructivism and stimulus-response present in the text panels. Overall the text panels ranked 3.77 for preservation, 2.35 for interaction with the Director of Public History not finding the text panels interactive and therefore not responding, and 3.33 for interpretation (Figure 5.49).

As evident in figure 5.49 reviewer's feedback varied greatly. This variation possibly occurred due to reviewers differing professional backgrounds. The designers and historian ranked the panels as above average for interpretation based on visitors having the opportunity to read and interpret the text for themselves, while the museum professionals ranked it lower based on viewing the text as straightforward but needing more layers of information on Mrs. Madison in areas such as calling cards and First Ladies panels. To improve maintenance and preservation rankings, the designer could have protected the text panels in glass cases or by adding a protective coating.



**Figure 5.49:** Ranking of text panels.

### Display Cases

Reviewers reflected that the display cases were adequately preserved but requested that the designer list the materials and steps needed to meet museum standards for exhibit preservation. Reviewers found the big idea in the contents of the cases, not the cases themselves, and requested text to accompany the artifacts. Opinions varied concerning materials, light, and color as the design professionals group focused on modifications and details such as using a similar wood for all display cases. Museum professionals commented on placing a photograph relating to the dishes above their display case to unite with the rest of the exhibit, and the Director of Public History said it was a “thought-through design system.” The learning theories identified by reviewers include: discovery and constructivist seen by two groups and expository-didactic reported by one group. The reviewers ranked the display cases overall as 4.1 for preservation, and

3.2 for interaction based solely on responses from the design professionals as museum professionals and the Director of Public History responded with “not applicable.” Finally reviewers ranked the display cases as 3.1 overall for interpretation (Figure 5.50). The museum professionals and designers could have responded with higher remarks if the designer provided construction documents for the cases. Responses regarding interaction and interpretation were as expected as the display cases were not designed to provide moments of interaction or interpretation, solely preservation and presentation of the artifacts.

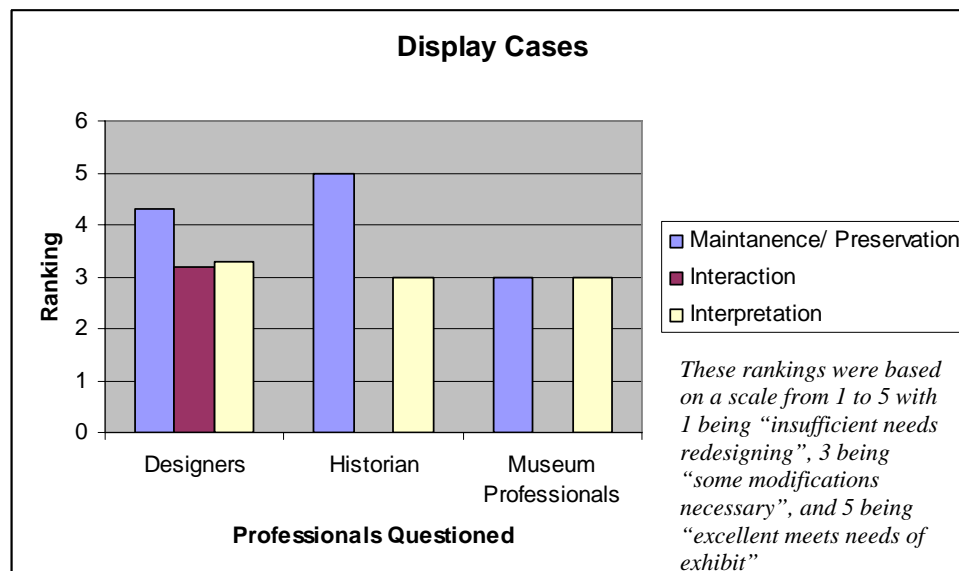


Figure 5.50: Ranking of display cases.

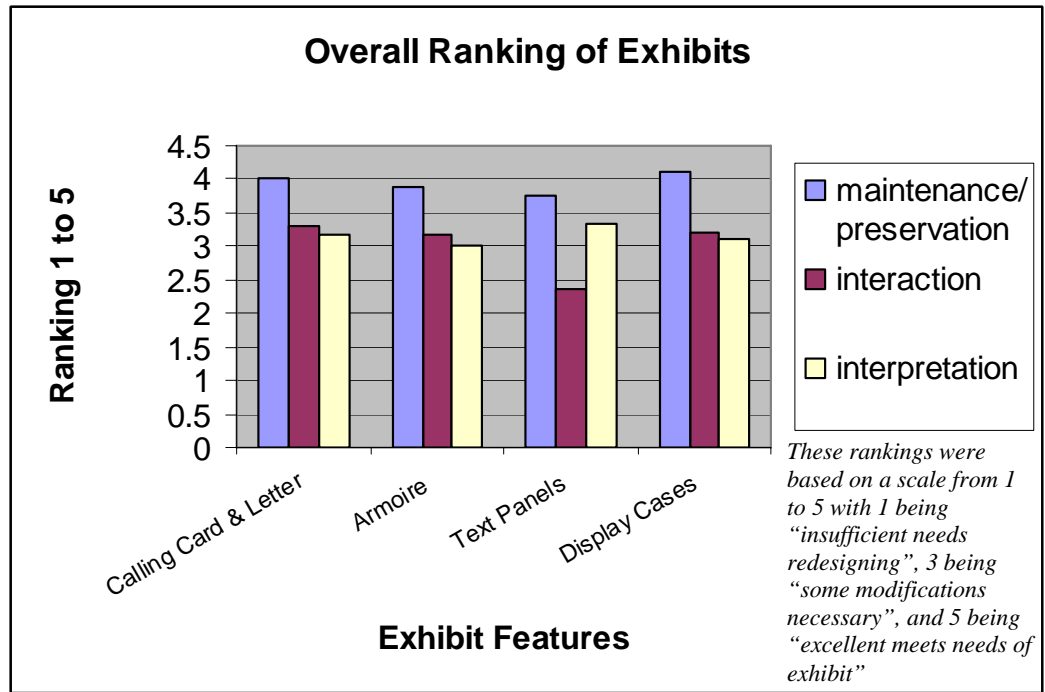
### Exhibit in its Entirety

The review process focused on four main features within the Dolley Madison exhibit; calling card and letter interactive, armoire, text panels, and display cases, which produced a variety of results based on the group reviewed. The designer reflected on

these comments and the review process noting several themes that emerged, including continuity or cohesiveness of the design and ease of use and understanding by visitors. Design cohesiveness related to both individual aspects of the exhibit and the exhibit as a whole. For instance, text panels presented different information and images based on subject matter. However, these panels related to one another in their color schemes, layout and organization of text. Each display also presented information and artifacts with their own unique features yet all tied to the main exhibit space through materials, light, and color and the big idea. Overall reviewers ranked the exhibit as average to slightly above average with a mean score of 3.9 for maintenance/ preservation, 3.0 for interaction, and 3.2 for interpretation on a scale from one to five.

Figure 5.51 shows an overall summary comparing individual components within the exhibit. This figure shows that overall the reviewers expressed that the design succeeded in maintenance and preservation as well as interaction and obtained an average ranking on interpretation. The greatest discrepancy in the data occurs with the text panels which show a lower ranking for interaction and higher interpretation ranking than the other three exhibit components. These results vary due to the historian providing a high ranking for preservation compared to the other respondents. Interaction ranks low comparatively for the text panels as a result of their design only providing visual interaction. These discrepancies aside, the rest of the exhibit components received a ranking of slightly to well above average in all areas. These rankings might improve if the designer reworked some details of the design or questionnaire, or if she surveyed a larger group.





*Figure 5.51: Overall Ranking of Exhibits.*

## **CHAPTER VI**

### **CONCLUSION**

In this design project, the designer examined and developed methods for implementing more interactive exhibits that also balanced artifact preservation within the museum setting. This developed through the theoretical design of an exhibit on Dolley Madison at the Greensboro Historical Museum. Throughout the design process, the designer focused on material culture, preservation, and theories of learning. As research and the design process concluded, the designer reached a consensus on several notions she construed throughout the development of the project in regard to theories of learning, fallacies with the collection of data, and an answer to the question - how does a designer balance visitor interaction with artifact preservation? Before revealing the answer to this question, it is important to understand how theories of learning and fallacies within data collection affected the design process.

#### **Theories of Learning**

Theories of learning inspired and guided the designer throughout the development of this thesis. From the beginning the designer strove to develop a highly interactive exhibit using discovery and constructivist theories of learning. However, as research and design progressed, the designer quickly realized that only in definition can one easily separate the four theories from each other. In application the four theories intertwine, though one or two theories may dominate certain aspects of the design. For example, the

text panels within the Dolley Madison exhibit utilize the expository-didactic and constructivist theories, which depending on the visitor one theory may apply more than the other. Likewise, the theories of discovery and stimulus-response apply to the armoire though some visitors may find constructivist learning present as they ask questions of their peers and museum staff about the dress and armoire. Within many exhibits the use of any combination of these theories applies. No matter how hard the designer strove to solely use constructivist and discovery learning, stimulus-response, and expository-didactic learning emerged as optimal alternatives and additions forming a positive balance within the exhibit. Too much interaction within an exhibit space could potentially create sensory overload for the visitor and cause them to overlook the message of the exhibit as they become engrossed in activities. In the end, a balance among all four theories of learning served as the optimal design solution while also appealing to a wide audience. Understanding that people learn differently and different learning styles work better for some individuals than others, the designer developed a questionnaire for a panel of professionals to respond to in which the designer strove to eliminate bias created from leading the respondents to indicate that they saw certain learning theories present in the design.

### **Fallacies of Data Collection**

In developing the questionnaire and acquiring data from the panel of professionals the designer strove to eliminate bias. The designer attempted this by giving a similar presentation to all three groups of professionals and by trying to eliminate bias caused by questions that led respondents to answer in a particular way. The difficulty in presenting

the theories of learning and questioning the panel of professionals on which theories they found present came through the inability of the panel to explore the exhibit on their own and to decipher which theories they discovered. A solution to this could have been to provide the panel with a computer interactive environment or a full scale version of the exhibit that they could explore. Instead the panel received a verbal description aided by still images of the exhibit accompanied by a list of definitions of the theories of learning.

As the data collection process further unfolded, the designer realized that panel respondents in each group influenced the responses and opinions of one another. During the presentation, respondents asked questions and made comments. As the questionnaire data shows (Appendices L and N) respondents within each group, designers and museum professionals, made similar comments among their group in direct relation to verbal comments posed by the reviewers during the presentation. To remove this bias the designer could have presented to each professional individually and then collected their responses.

The evaluation process as a whole provided many challenges for the designer. Designers learn early on that a thick skin is the key to survival when receiving feedback. Everyone has an opinion, especially when it comes to design and as a result, no design goes without judgment passed on it. The most difficult step in this process of research, design, and evaluation came at the end. A difficult task comes from presenting an experience to people and then collecting information on it. As discovered early on in this research, people learn in different ways. The evaluation process attempted to cater to different learning styles with written questionnaires accompanied by visual aids, a

presentation, and verbal discussion. However, these methods failed to provide people the chance to discover and interact with the design at their own pace and in any manner they chose. This type of evaluation, typical in the field of design, needs to be reworked. If the saying is true that “a good design speaks for itself,” then the designer provides evaluators with their design, allowing them to freely explore and interpret it, only speaking up when evaluators come to them with questions, which might not occur if the design succeeds. That opens a new round of questions about what makes a successful design. Does a design succeed if it receives all positive feedback? For this project the design succeeded if preservation and interaction were balanced.

### **Thesis Question**

In this thesis, the designer strove to answer the question – how does a designer balance visitor interaction with artifact preservation? Throughout the process the designer encountered the need to limit both interaction and preservation at different times for the benefit of each individual exhibit. The answer to the question thus developed, the need to sacrifice preservation occurs when the educational benefit for the visitor can only be attained through interaction. Only in cases where the intrinsic need for education comes from first hand exploration of the artifacts, or reproductions, should the artifacts preservation needs be reconsidered.

### **Future Pursuits of Interaction**

For anyone interested in pursuing the topic of balancing interaction with preservation within the museum setting the designer recommends several things. First, find an exhibit space available for alterations with fewer limitations than the space

described in this project. Though these challenges forced the designer to expand her notions of possibilities, they also constrained and limited the actual options available. Working with an unlimited budget always helps a designer strike any creative note they wish, as was the case for this design. Select artifacts carefully as the artifacts embody the spirit of the learning experience. For this design process, the designer primarily used a list of artifacts predetermined by the Greensboro Historical Museum and added to it using Dolley Madison artifacts in existence in the United States. The designer primarily focused on Mrs. Madison's dresses and letters which created a learning experience focused on social customs and the role of women in the early nineteenth century. By far the most important aspect of exhibit design, whether it involves interactive exhibits or not, consists of finding a topic or aspects of a topic that excites the researcher. Initially Dolley Madison did not excite the designer, however researching Mrs. Madison led the designer to discover an intriguing woman who stood above the average woman of her day and set a standard for future First Ladies of America. Finally, keep in mind the importance of exhibit design remains to educate the visitor. When designing interactive exhibits the possibility of losing sight of the end goal, to educate, is highly probable if the designer lets themselves get caught up in the flash and flare of an interactive. Sometimes simply adding a button, flip panel, or drawer to an exhibit is enough interaction to inspire.

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## APPENDIX A: SCHEMATIC DESIGN REVIEW NOTES

**Wednesday Aug 30, 2006**

What's needed for the Schematic Design Review presentation?

Full model 1-50 scale,

Larger scale of a piece at ¼" – 1/8"

Smaller details at least 1:1 or 3:1

Information to find out:

What I need to determine about the physical space:

Measurement of case window and door in exhibit case

What's going on in Lobby?

Figure out what's above the ceiling (can it be adjusted?) There are other exhibits on the floors above and the ceiling height cannot be increased much at all, perhaps 6 inches maximum.

Find out existing HVAC and electrical lines (see sketches)

How to connect textiles to the wall?

Detail some walls (how to display artifacts on them?)

What is the rehab code? Look into 501 link on ~plucas website

Can walls be pushed out to create more room? No, there are period room exhibits on either side of my exhibit space and these cannot be altered unless I have a plan for what to do with those artifacts and spaces.

### **Comments from Schematic Design Review**

- Consider scale. Keep things on an intimate, personal, human scale similar to how Dolley Madison was portrayed to individuals when she was alive.
- Look into Led Pencil studios (might not be correct name) in Architectural Record 2005 editions. There is an article about monofilament and light that might be useful to my design.
- Consider how long someone will be in the space and experience it. Use time to design experiences within the exhibit.
- Use artifacts as inspiration for how to manipulate the space, or the essence of the artifacts to aid my design.
- Only use objects/ designs that have two uses minimum. If not, the object(s)/ exhibit(s) do not belong in the space.

### **Monday September 11, 2006**

- Complete section drawings
- Focus on showing full details of the space. Make a ¼ or ½ scale model.
- Need to refine my concept
- Pull in artifacts and start showing how they are displayed.

### **Wednesday September 13, 2006**

- Think of dividing the walls into three areas that represent division of wall areas of 1800's period rooms. For instance, wainscoting, elaborate cornice, and baseboard. This could be a way to organize where text panels occur (wainscoting), and where lights are placed (cornice).
- Consider pulling different colors onto the walls (lighting to darker tones on one wall)
- How to stretch, pull, or drape fabrics?
- Design new doors leading into Jugtown exhibit
- Consider putting plain panels behind the dresses to help make them stand out from the background paint color.
- Go back to museum to measure Jugtown area and explore ideas for pushing exhibit into that space.
- Don't literally reproduce a room from the 1800's, just take inspiration from those details and organization.
- Charles expressed an idea based on my the corset on my précis to place a kiosk in between the two areas (slick corridor between lobby and Jugtown, and exhibit case) and use the corset idea to visually pull the two areas together. On the back side (away from the corridor) of the kiosk there could be a place to view or interact with manuscripts and/or other artifacts.

**APPENDIX B: DESIGN DEVELOPMENT NOTES PEERS AND UNCG  
FACULTY**

**September 2006**

Peers and UNCG-Interior Architecture Faculty

-in response to the limitations of adjusting walls...make sure that you look to the floor and ceiling for further design inspiration....perhaps hangings from the ceiling or lowering the ceiling in certain areas, on the floor you might want to think about pathways,,,dark to move through, light to where you want attention.

-watch the contradiction between "discovery" and "follow the yellow brick road"...I know that you didn't really mean the later when you stated it, but think further about how exactly you will work with complete discovery as opposed to discovery that the viewer is in some manner led to.

-mystery...remember that something obscure may be more inviting than the obvious show....however, make sure that the mystery uncovered is worth the exploration

-"what is being revealed should be revealing"....look to her story to find more interesting



reveals beyond the date of her birth (example used in critique)

-really explore and think about unconventional ways that you might be able to alter the  
columned entrance to provide for a more theatrical entrance

-the overall main issue is the interaction with the objects....this should be your main  
focus..back to the notion of how to experience and interact with historically fragile  
objects.

## **APPENDIX C: DESIGN DEVELOPMENT NOTES BENJAMIN FILENE**

**Wednesday October 4, 2006**

Benjamin Filene meeting

- Design and content need to be in sync (customize design to content, ie. Artifacts or story I want to tell)
- How does everything I create connect to an interpretive point/skill? Why public and private? What do I want visitors to know about Dolley Madison's public and private lives?
- Public life very much domestic due to the times, personal life is her public work (dinners, relationship to husband) but there is another level of private that's one step removed (emotional/ inner life).
- What is it like to be a public figure as a woman in the 1800's?
- Dolley Madison today had lost her impact, what do we see her as today? Snack cakes? What?
- Projected images need to be relevant to public and private. Think about information someone gets from a 30 second pass through and a five minute pass through. How can I reinforce this idea either verbally or nonverbally?
- Projection is not interactive, just visual. How can I design it so that it is interactive?
- This museum would benefit from motion, images, and push buttons.

- Most ideas that don't fit in the space, if they are good ideas can find a way in.  
Dinner party idea (recreate a dinner party) won't work in the space, it's too small, but it could be done to a smaller scale (one place setting).
- Public vs. private works well. How do I present public action/face and then reveal private view behind it?
- 1<sup>st</sup> minute to GHM when I present should address "this exhibit is about either tension between public and private life of Dolley or inner play between public and private personas that emphasizes womanly domestic duties that masked more personal private concerns. Establish a BIG IDEA!
- Much of her life was about ritual and public presentation and hidden are her personal, private thoughts.
- Start with ideas of popular impressions of her that seem to be distant and 2-D, not very personal understanding of her. The reality is more interesting, less neat and more personal.
- Slave issues are big now. Dolley is known for... slave culture is deeply rooted in our culture today. Mrs. Madison is known for embodying slave culture (using it like it was at the times, she had servants and they waited on her and took orders from her)
- Layers that reinforce each other. It's OK to have things that stand out more than others.
- She's known as a perfectly cultured lady of the day but behind the scenes she breaks the rules (calling James by his first name and endearing terms).

- Include global context only if it relates to context within exhibit (relates to story).
- Public and private aren't separate they work together/ intermingle. Interactives reinforce this idea (dichotomy of public vs. private)
- A single artifact doesn't have both sides in it, does it?
- Public needs to reference private and vice versa. Most people didn't know her private life for example.
- Snuff box as public and private. Public wealth and refinement yet inside view is private (snuff is brown, earthy, raw and ordinary), show decorative exterior and unrefined interior.
- What made these dinner parties less aristocratic and able for the American public to digest during a time when most parties and socialization among government officials was viewed as European and un-American? Dolley was the key in bringing European ideas into American government without offending people.
- Start with idea of public vs. private and think how can I illustrate this physically? Apply it to all aspects of history list I created.

## **APPENDIX D: DESIGN DEVELOPMENT REVIEW NOTES GHM STAFF**

Meeting at GHM – Oct 18, 2006

big idea – deeper history of dolley

duality between public and private

high/low contrast

looking at the artifacts for inspiration

theme of public /private seen through dresses

use period fabrics

images on glass panels

utilize the exhibit case space as walk-in space for visitors

right side box -- flickering images from a projector

flipping box

period room approach

searching for a middle ground

view of DC window – instantaneously put people in the place

arched entryway

desk (cubist) links both public and private

big idea – represents dolley madison

extraordinary accomplishments through simple means

susan sees more of your project in this statement

simple quaker beginnings

extraordinary is much stronger

Martin – stonger considering scale

Adrienne – conflicted public and private

Amanda – too hard to set up a distinct public and private

Martin – how people interpret their public life for view

Dolley had specific ideas about her legacy – a consummate politician

Betty K—“simnple” – takes you back to her quaker beginnings

Adrienne – stay your ground

Martin – simple – look at other words; massive sense of the change in the early republic

she was a woman of many privileges, a power broker

politically connected, important

her legacy as important as Madison himself

Dolley is shone alone in a lot of images

Martin – founded the social structure of the city

Amanda – need to narrow focus to public life

Martin – different, stormy life – violent upheaval

serene portrait representing her calm exterior, presiding over a turbulent

Susan – look at Allgor

parlor and politics articles

McCullough – first ladies

Dolley was well liked but there were problems with politics – conflicts/gossip

bigger than life

so little of her actual spoken word

Adrienne – how do you do that experientially?

museum vs. reproduction

Martin – ADA

maintenance

life cycle of exhibit

heat load

not just Madison exhibit, also entrance to jugtown

Martin – where are you now philosophically?

Amanda – middle ground between modern museum and period rooms

what to do with interactives

want an essence or feeling of the time period

Martin – tactile experience critical, no supervision in setting

Amanda – balancing of preservation and use

reproduction works on two levels: interface, or experience like Dolley

Martin – delicate balance, how you present it without it being a fictional history

how is it truth and not Disneyland?

susan – how do you create an emotional response without negative impacts on the artifact/exhibit?

people NEED to see the real thing, not reproductions

Adrienne – practical issues of reproduction, creating something we no longer have the skill to create

Betty K. – security issues important

Martin – also have to think of maintenance, how will it look 10 years from now;

how does it continue to look good



Amanda – essence of period room without physically reproducing

Adrienne – context of the world then longer view of history through design details

Amanda – when Dolley Madison furnishing white house – made sure all furniture was American made

Martin – wonderful drawings of furniture at Atheneum (Philadelphia)

set early republic taste

Susan – Latrobe drawings at LOC

drawings for the chairs at the White House

Martin – reproduce Latrobe chair; utilize primary documents, layers

Amanda – depict life as a whole or a snapshot? text panels before and after she was First Lady

Susan – pick a peak moment; talk about influences on current day

Eleanor Roosevelt, Hillary Clinton, Jackie Kennedy

Susan – use of fabric good, reflect fabrics of period

Adrienne – fire code

Susan – address ADA heights, fire door fabric panels are issues

use of image on glass doors slows people down = good

less is more in the small space

a step off the main path

like viewing DC from window

there's a dinner party of 1848 at LOC site

looking OUTWARD

use one image to say many things

make sure its not TOO artificial

Martin – interactives – white house years, sit in a Latrobe chair, soirees and receptions

letter writing

she sent the first message for Morse code

calling cards, rituals and practices

Betty K. – etiquette, visit protocols

what would you write after attending a party?

Adrienne – could get you to writing implements, letter carriers, addresses

Betty K – addressing others, sealing wax

Martin – steel nib? technology of writing

Adrienne – how to work in technology without overplaying it – seamlessly work it in

Martin – give out calling card as a takeaway for a web address – a web site that

accompanies the exhibit – that way the exhibit continues – learning more about the period

and expanding to links for the time period on the web

if you have the web exhibit, you can simplify what is in the exhibit

Susan – lighting, indirect, probably better

Martin – subtle lighting, challenging spot

Amanda – flip panels – LED lights, fiber optics

Martin – period objects meant to be viewed with a single light source

should approach the paintings and artifacts as you would in the time period

(a question of authenticity) – lighting in harmony with room setting

Martin – museum asks that you suspend reality – how can light contribute to that? –

candles, whale oil lamps

Betty K. – likes the turning picture

Adrienne – push the idea further; multiple images, not just two

Martin – could go through life span, takes up less space

Adrienne – how you could make it work = terrific issues

Susan – how do you address time AFTER the presidency; what is her legacy after?

Martin – charge for the exhibit is to set the hooks, get them to come back and relate to the

rest of the museum

Susan – interactive myths, popular culture ideas

Martin – edges are your friends, and demographics, and budget, set limits – and that is a very good thing

Adrienne – combine politics and influence fashion

Martin – political, pop culture

Susan – pick a time frame

what are local ties?

why does GHM have the stuff?

## **APPENDIX E: POLITICS PANEL TEXT**

### **Dolley Politics**

In 1800's society women did not participate in politics. The acceptable social realm of a woman was domestic and focused on cooking, cleaning, raising children, taking care of her family, and serving as a hostess for her husband's guests. At this time, women did not have the ability to vote and it was common practice for husbands and wives to address one another as Mr. or Mrs. (insert last name here). Dolley Madison was a formidable woman especially for her day. She overcame societal restrictions by embracing them and using them to her advantage.

Dolley Madison became involved in politics through serving as a hostess to the nation. She opened her home, during her stint as Wife to Secretary of the State and then as First Lady, to all people who had "previously been introduced to her."

Many invitations to her homes came in the form of newspaper announcements.

She planned many gatherings of people including, foreign dignitaries, U.S. Senators and Congressmen, and even men and women who weren't the social elite. Dolley Madison seemed available and approachable by all people.

The tools Mrs. Madison used to politic were all things social such as: invitations, calling cards, dinner ware and feasts that included an assortment of recipes given to Mrs. Madison from U.S. citizens.

James and Dolley Madison shared a unique bond for their day. They referred to one another using pet names and terms of endearment. Mr. Madison kept Dolley informed about the current debates and issues in government, a very uncommon thing for husbands of that day to do. Much of this information exchanged between the two can be found in the original letters they mailed to one another several times a day when they were apart.

### **James Politics**

Although he served eight years each as a member of the U.S. House of Representatives, as secretary of state, and as president, Madison's principal contribution to the founding of the United States was as "Father of the Constitution." He played the leading role in formulating the U.S. Constitution, and he was its leading defender and interpreter for 50 years.

Madison's understanding of public affairs developed during the decade of colonial resistance to British measures, 1765–1775. In 1776 he was elected to the Virginia convention that declared the colony independent from Britain and drafted a new state constitution. There he strengthened the conventional clause guaranteeing religious "toleration" to proclaim "liberty of conscience for all."

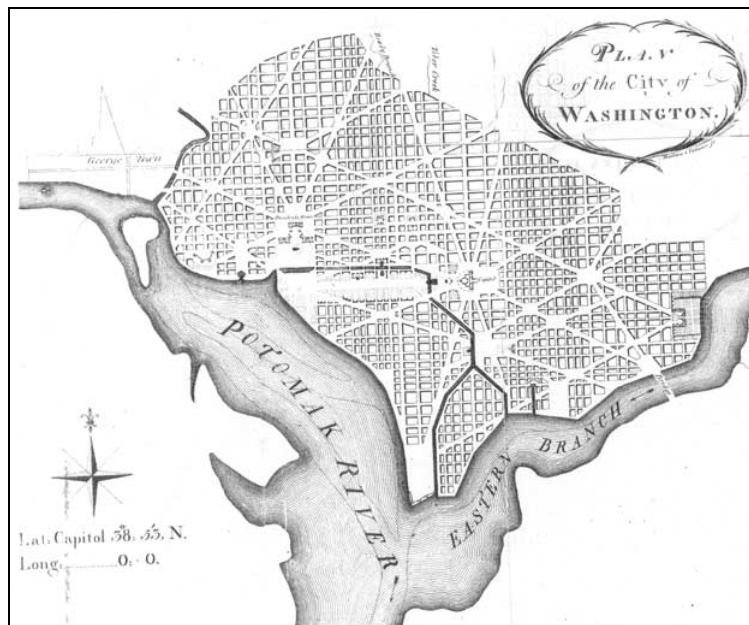
In the social sphere James Madison took a backseat to his wife. He did not make frequent house calls and presented a calm, reserved presence. It is frequently said in historical documents that James Madison was at his prime politically in the years up to and including the writing of the U.S. Constitution while the Presidential years lacked the significant accomplishments of his earlier years.

The tools Mr. Madison used for politicking included, a quill and ink for scribing important documents and making official contracts, a podium for giving speeches, and the private meetings he held with cabinet members and friends.

**APPENDIX F: IMAGES OF DC IN THE EARLY 1800'S**

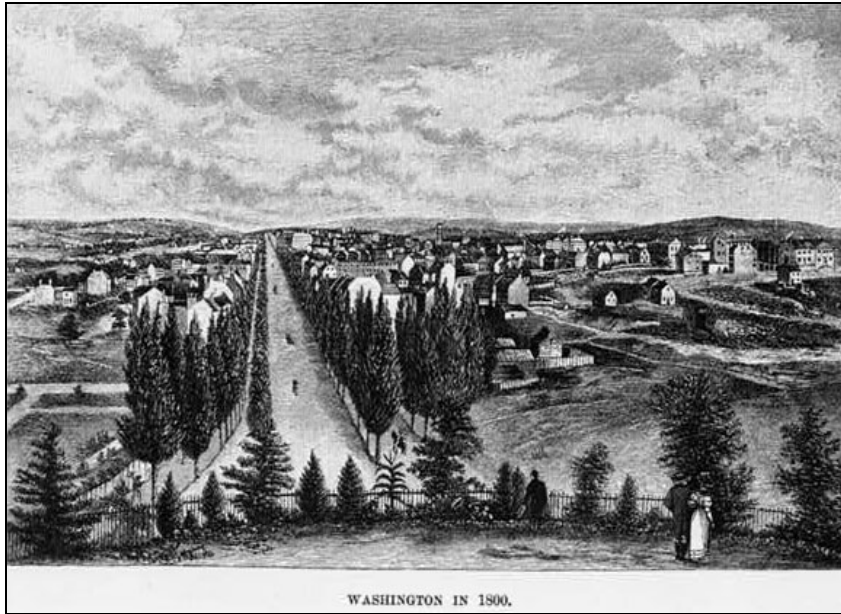


*City of Washington from beyond Navy Yard,, painted by G. Cooke from Library of Congress archives*

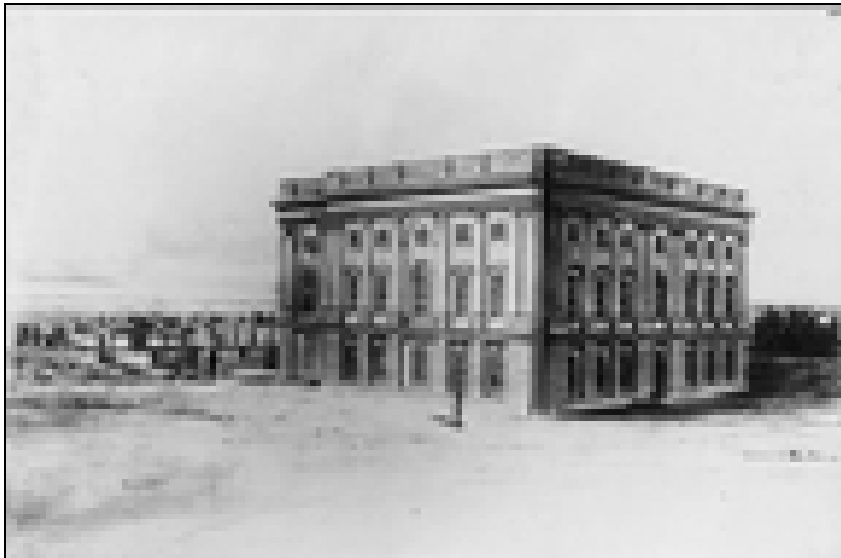


*Map of DC 1800*





*DC 1800 from memory*



*View of Capitol when first occupied by Congress, 1800 from Library of Congress archives*



*White House 1800*

## **APPENDIX G: CALLING CARD PANEL TEXT**

In the early part of the 19th Century another tradition arose very quickly on the scene, the leaving of Calling Cards.

This ingenious way of leaving cards formed part of a social etiquette which ranged in meanings. They were an imperative part of introductions, invitations and welcomed visits. Calling Cards fashionably spread throughout Europe, including England as a way for people to get into the elite social circle, and to keep out the unwanted socialites.

Calling Cards kept social aspirants at a distance until they could be properly screened.

Just over a century ago, one of the favorite pastimes was to collect these ingenious, yet delicately illustrated advertising cards that we now call "Trade Cards or Calling Cards".

These cards evolved from the cards of the 1700's, where tradesmen used them to advertise their services. Early samples of cards from the late 1800's were brought to America ranging from stunning to that of brightly colored cards which were generally pasted in Victorian keepsake scrapbooks.

The fashions of many of the calling cards were diverse, depending on the immediate trends. Some were found to contain initials, fanciful artwork or romantic poems which were commonly fashionable. Others were of a strictly business nature, more commonly used by gentlemen.

The lady's card was larger in size versus the small breast pocket size of the gentlemen's. A lady's card may be glazed, while her husband's was not. Victorian cards were larger than their earlier counterparts, so only a few were carried at a time.

The need for cases was soon established which offered easy transport of such cards. These were made of various materials, including ivory, silver, and a lighter papier-mâché. The top of the lids during the 1830's often resembled prominent castles views, such as Warwick or Windsor. By the 1840's, after Queen Victoria's purchase of Bal Moral, Scottish views became popular. The cases during the Regency were primarily of filigree, leather and tortoiseshell. Victorians preferred ivory, tortoise shell and woodwork. Only the wealthy could afford such cases made of gold and other metals which were very expensive.

The engraving was generally small and without embellishments, although ornamental scripts soon became widely used as the century went on. A simple 'Mr.' Or 'Mrs.' before the name was sufficient, except in the case of acknowledgement of rank (Earl, Viscount, etc.). The earlier Victorian Cards contained only a person's name, household name and/or title. By the end of the century, the address was then displayed on card, and when applicable, a special occasion, such as a lady's reception day.

#### Rules for Calls and Leaving Cards

An inviting front entrance with wood floors was an essential part of all Victoriana homes. A proper entry hall was considered the first impression and most important to all

its visitors. The entry hall was narrow, but allowed enough room for a couple of chairs or a bench, mirrors, a coat and umbrella stand, and maybe even a hat rack or hall tree. In addition, the calling card stand with bouquets of flowers, accompanied by the silver calling card receiving tray, which elegantly displayed the most prominent names on top. Most receiver trays displayed classic features of popular aesthetic styles. Although not all could afford the sterling silver trays, the less fortunate households displayed glass or china dishes, which were used for the same purpose.

A lady would start making calls immediately upon arriving in town. This would notify everyone that her family had arrived. She remained in her carriage while her groom took her card and handed it to the appropriate parties.

The card was conveyed to the mistress of the house, who would then decide whether or not to receive the caller. Out of respect, no questions or inquiries as to the whereabouts of the residents or the mistress were asked during the initial visit.

If the mistress was 'not at home', it was a rejection of the visitor. A reciprocal card may be given to the caller, but if none was given formally, this generally indicated less desire to further the acquaintance. However, if formal calls were given, there was hope for the relationship to grow.

By mid-century, a wife could leave her husband's card for him. She left her own card, plus two of her husband's--one for the mistress of the house, and one for the master. Other names which also appeared on the calling cards were offspring which included grown daughters living at home who accompanied her on a call.

A message could be left without actually greeting the family by turning down a specific corner or folding the card to express sympathy, congratulations or affection. This generally indicated that the card had been delivered in person, rather than by a servant. Some more elaborate cards noted phrases, some of which were in French. They were generally imprinted on the reverse-corner side of the card, stating words such as: Visite, Felicitation, Affaires, and Adieu. The card would then be turned side up, showing the explanation for the visit.

Calls should be made only on at home days. Days and times for these were engraved on visiting cards. A newcomer waited until she received cards from neighbors. It was then good manners to call on those neighbors who left cards.

Formal calls were made following ceremonial events such as engagements, marriages or childbirth, and also as acknowledgement of hospitality. After a specific event, it was courteous to make a call within a week for all condolences and congratulations. A visitor may ask for a more personal admission. If not so intimate, they inquired to the servant as to the person's well-being.

Each visit had significance and was noted with specific times. Ceremonial visits were made the day after a ball, between three and four o'clock, when it sufficed to simply leave a card. Or the semi-ceremonial calls were made within a day or two after a dinner party between four and five o'clock, and within a week of a small party. It was part of general routine to set aside times for these types of visits.

Remembrance of the beloved, 'Mourning calls' were made in the afternoon. Victorian mourning artifacts offered women with a means of creating a particularly feminine historical memory that allowed them to preserve and communicate their stories, and those of their families, while engendering and transmitting a meaningful sense of feminine identity and social role.

Sunday was never a day of visit; this day was reserved for close friends and relatives. Visits were brief, lasting less than thirty minutes. During the visits, it was courtesy to leave within a few minutes if another caller arrived.

#### Calling Card Etiquette, 18-19th centuries

"Calling" was a somewhat ritualized version of the fine old custom of "visiting". There were certain fixed rules laid down by society which might apply to a resident in a small town with the same force as in a large city.

- On making a first call you must have a card for each lady of the household.
- On making a call leave your card with the servant. You will be allowed to see the

hostess only after she examines your card.

- On the hall table in every house, there should be a small silver, or other card tray, a pad and a pencil.
- When the door-bell rings, the servant on duty should have the card tray ready to present, on the palm of the left hand.
- A gentleman should carry them loose in a convenient pocket; but a lady may use a card case.
- If your card receives no acknowledgment, you must conclude that for some reasons they do not wish to extend their acquaintance.
- Do not examine the cards in the card-basket. You have no right to investigate as to who calls on a lady.
- A young lady can have a card of her own after having been in society a year.
- American gentleman should never fold the corner of his card, despite of the temporary fashion. Some European gentlemen, on the contrary, fold the upper right corner to indicate that they've delivered it themselves (the servant should never hand his master's card folded).
- Fold the card in the middle if you wish to indicate that the call is on several, or all of the members of the family.

Signs on a visiting card

The initial letters you can meet on personal cards stand for the French words:

- p. f. - congratulations (pour féliciter)
- p. r. - expressing one's thanks (pour remercier) - even if one is presented with flowers



- p. c. - mourning expression (pour condoléance)
- p. f. N. A. - Happy New Year (pour feliciter Nouvel An)
- p. p. c. - meaning to take leave (pour prendre congé)
- p. p. - if you want to be introduced to anybody, send your visiting card (pour présenter)

## **APPENDIX H: FIRST LADY PANEL TEXT**

Q: When White House staff mention FLOTUS, what do they mean?

A: **First Lady Of The United States**

What distinguishes a First Lady from other women? A First Lady is someone married to a President or a person in a political position such as a Governor; she is not elected into her position, carries no Constitutional duties, and earns no salary. Nonetheless, she attends many official ceremonies and functions of state either along with or in place of the President. The First Lady also frequently participates in humanitarian and charitable work. Many have taken an active role in campaigning for the President with whom they are associated.

### **Dolley Payne Todd Madison (1801-1809\* 1809-1817)**

Like many young women of her day, she became a young widow when her first husband died of yellow fever. Although Representative Madison was 17 years her senior, they married in 1794. As the wife of the 4<sup>th</sup> U.S. President, and North Carolina's only First Lady, Dolley Madison became the most popular and influential woman in the nation's new capital of Washington, D.C. in 1809. She presided over the first presidential inaugural ball in U.S. history

Born in 1768 to Quaker parents, historians would record Dolley Madison as one of America's best known and most beloved ladies of the White House. Her outgoing nature charmed both dignitaries and citizens. Her personal style made her "The leader of everything fashionable in Washington." Hostile statesmen, difficult envoys from Spain or Tunisia, warrior chiefs from the west, flustered youngsters--she always welcomed everyone

Her contributions and experiences include heroic efforts during the War of 1812 when the British burned the Capitol, honors from Congress, witnessing historic events and the acquaintance and friendship of many of America's earliest political figures.

Rumor has it that the name "First Lady" was coined in 1849 by U.S. President Zachary Taylor in a eulogy describing Dolley Madison and her ability to serve as hostess to a nation.

Dolley Madison was the initial First Lady to formally associate herself with a specific public project; as a fundraiser, supporter and board member, she helped to found a Washington, D.C. home for orphaned girls. She also befriended nuns from a local Catholic school and began a lifelong association with the organization.

When Dolley Madison died in 1849 at the age of 81 she had charmed generations of Americans in public life for more than 40 years.

Dolley worked to raise money for the Washington City Orphan's Asylum, becoming the initial First Lady to sponsor her own project.

**1844:** At a time when women could not hold office or vote, Congress honored Dolley Madison with a "Seat within the House" so she could visit the House of Representatives whenever she liked.

**184-:** Mrs. Madison witnessed Samuel Morse's demonstration of the telegraph to Congress and was the first person to send a personal telegraph message.

- Quote:

("her message here")

### **Anna Eleanor Roosevelt (1933-1945)**

Eleanor Roosevelt was an American political leader who used her stature as First Lady of the United States from 1933 to 1945 to promote her husband's, Franklin D. Roosevelt, "New Deal" and advocate for civil rights. After his death she built a career as an author-speaker, a New Deal Coalition advocate and spokesperson for human rights.

She was a first-wave feminist (though she opposed a specific Equal Rights Amendment for women) and was an activist role model as First Lady.

During World War II, Eleanor Roosevelt was very active on the home front. With New York Mayor Fiorello LaGuardia she co-chaired a national committee on civil defense. She made innumerable visits to civilian and military centers to boost war morale. She especially supported more opportunities for African Americans and women.

Mrs. Roosevelt earned large amounts of money from advertising activities. The Pan-American Coffee Bureau, which was supported by tax revenues from eight foreign governments, paid Roosevelt \$1000 a week for advertising. When the State Department found out that the First Lady was being paid so handsomely by foreign governments, they unsuccessfully tried to have the deal cancelled.

After World War II, Mrs. Roosevelt played an instrumental role in drafting the United Nations Universal Declaration of Human Rights. Eleanor Roosevelt served as the first chairman of the UN Human Rights Commission. On the night of September 28, 1948, Mrs. Roosevelt spoke on behalf of the Declaration calling it "the international Magna Carta of all mankind". The Declaration was adopted by the UN General Assembly on December 10, 1948. The vote of the General Assembly was unanimous except for eight abstentions. The Declaration was Eleanor Roosevelt's crowning achievement.

Eleanor Roosevelt was a leader in forming the United Nations, the United Nations Association and Freedom House. She chaired the committee that drafted and approved

the Universal Declaration of Human Rights. President Harry S. Truman called her the “First Lady of the World” in honor of her extensive human rights promotions.

### **Jacqueline Lee Bouvier Kennedy Onassis (1961-1963)**

Jacqueline Kennedy Onassis, born into wealth and educated in fine private schools, she sought to preserve and protect America’s cultural heritage throughout her life. Jacqueline was dubbed "the Debutante of the Year" for the 1947-1948 season, but her social success did not keep her from continuing her education. As a Vassar student she traveled extensively, and she spent her junior year in France before graduating from George Washington University. These experiences left her with a great empathy for people of foreign countries, especially the French.

The results of her hard work are evident within Lafayette Square in Washington, D.C. While she was First Lady, she helped to stop the destruction of Lafayette Square, because she knew these buildings were an important part of the nation’s capital and played an essential role in its history. Later, in New York City, she led a campaign to save and renovate Grand Central Terminal, a beautiful, historic railroad station. Today, more than 500,000 people each day pass through it, and can enjoy its full beauty, thanks to her restoration efforts.

Jacqueline Kennedy became one of the youngest First Ladies in history. She had taken an active role in John F. Kennedy's campaign, even speaking to grocery store shoppers at one stop over the public address system. Her visit to West Virginia moved her deeply as she had never witnessed such raw poverty. Later, in the White House, when a need arose for new glassware Mrs. Kennedy suggested a company from the impoverished state supply it.

In 1960, Mrs. Kennedy spent many of her first months as First Lady restoring the White House which had fallen into disrepair. She established a fine arts committee to fund and oversee the restoration, hired several well known interior designers, and succeeded in getting Congress to approve legislation to establish all furniture and other pieces from the White House no longer used or needed, be donated to the Smithsonian Institute (instead of offered to former Presidents for their personal use).

Her artistic, musical, and cultural interests helped bring herself and her family into the cultural spotlight in Washington. After John F. Kennedy's assassination in 1963, Jacqueline Kennedy served as an example to the nation and world of strength in a time of sorrow. From 1978 until her death in 1994, Mrs. Onassis worked in New York City as an editor for Doubleday. At her funeral her son described three of her attributes: "love of words, the bonds of home and family, and her spirit of adventure."

Many people will always remember how she captivated the attention of this nation and the rest of the world with her intelligence, beauty, and grace. With a deep sense of devotion to her family and country she dedicated herself to raising her two children and to making the world a better place through art, literature, and a respect for history.

### **Hillary Rodham Clinton (1993-2001)**

Hillary's childhood in Park Ridge, Illinois, was happy and disciplined. She loved sports and her church, and was a member of the National Honor Society, and a student leader. Her parents encouraged her to study hard and to pursue any career that interested her. As an undergraduate at Wellesley College, Hillary mixed academic excellence with school government. Speaking at graduation, she said, "The challenge now is to practice politics as the art of making what appears to be impossible, possible." In 1969, Hillary entered Yale Law School, where she served on the Board of Editors of Yale Law Review and Social Action, interned with children's advocate Marian Wright Edelman, and met Bill Clinton.

With her husband's presidential election in 1992, she was the first First Lady to hold a post-graduate degree and the first to have her own successful professional career. She is regarded as the most openly empowered presidential wife in American history other than Eleanor Roosevelt. Mrs. Clinton took the role of First Lady one step further than her predecessors when she was, for a time, given a formal job in the Clinton administration to



develop sweeping reforms in the U.S. health care system. She headed the task force that proposed the Clinton health care plan, which was not enacted by Congress,

Departing from the traditional role of the First Lady, Clinton was directly involved in policy-making during her husband's presidency. Her prominent role has at times been termed controversial and generated debate on the changing status of women in America. As First Lady, Mrs. Clinton won many admirers for her staunch support for women's rights around the world and her commitment to children's issues. She initiated the Children's Health Insurance Program in 1997, a federal effort that provided state support for those children whose parents were unable to provide them with health coverage. She also successfully sought to increase the research funding for illnesses such as prostate cancer and childhood asthma at the National Institutes of Health.

The First Lady worked to solve the mystery behind the illnesses that were affecting veterans of the Gulf War. She initiated and shepherded the Adoption and Safe Families Act of 1997, which she regarded as her greatest accomplishment as First Lady

Clinton performed many less-political activities in her role as First Lady. With a lifelong interest in regional American history, she initiated the Save America's Treasures program, a national effort that matched federal funds to private donations to rescue from deterioration and neglect, or completely restore, many iconic historic items and sites,

including the flag that inspired the Star Spangled Banner and the First Ladies Historic Site in Canton, Ohio

Two First Ladies have held office in their own right. Hillary Rodham Clinton has been a United States Senator since 2001: her service actually began a few days before her husband's second term as President ended. She was reelected by her constituents in New York in 2006.

## APPENDIX I: QUESTIONNAIRE

Name: \_\_\_\_\_ Job Title: \_\_\_\_\_

### Calling Card and Letter Interactive Computer Exhibits

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the computers in this display are adequately protected? YES \_\_\_\_\_ NO \_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?
  
2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the calling card and letter interactive exhibits.
  
3. Design: How do material, light and color represented in this exhibit communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

## Calling Card and Letter Interactive Computer Exhibits

### Theories of Learning:

4. Following is a brief description of four theories of learning. Based on these descriptions please circle the theory or theories you see represented in the calling card and letter interactive computer exhibits?

*Stimulus-response:* Using positive and negative reinforcement to educate. Pavlov's dog is an example, as well as the positive reinforcement of receiving an A on an assignment in school, or a raise from your boss for a job well done.

*Expository-didactic:* Memorization and repetition are used for knowledge retention. Flash cards and repetitive drills in math class are examples of this. Often this theory is manifest through linear designs, usually sequential where one item builds on the knowledge gained in the previous.

*Discovery:* People learn by discovering answers and ideas on their own. This is manifest in open floor plans with little direction imposed on the individual.

*Constructivist:* Through question asking, visitors are free to explore the exhibit to find the answers.

5. Please elaborate on how you see these theories implemented in the calling card and letter interactive exhibits and do they add to or detract from the exhibit? Why or why not?

6. Please provide any additional comments or feedback you think necessary.

7. Based on the feedback you provided in this questionnaire, please rank the calling card and letter interactive computer exhibits as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

Overall Assessment of Preservation	1	2	3	4	5
Overall Assessment of Interactive Elements	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	4	5

## **Armoire Interactive**

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the artifacts in this case are adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?
  
2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the armoire exhibit.
  
3. Design: How do material, light and color represented in the armoire exhibit communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

## Armoire Interactive

### Theories of Learning:

4. Following is a brief description of four theories of learning. Based on these descriptions please circle the theory or theories you see represented in the armoire exhibit?

*Stimulus-response:* Using positive and negative reinforcement to educate. Pavlov's dog is an example, as well as the positive reinforcement of receiving an A on an assignment in school, or a raise from your boss for a job well done.

*Expository-didactic:* Memorization and repetition are used for knowledge retention. Flash cards and repetitive drills in math class are examples of this. Often this theory is manifest through linear designs, usually sequential where one item builds on the knowledge gained in the previous.

*Discovery:* People learn by discovering answers and ideas on their own. This is manifest in open floor plans with little direction imposed on the individual.

*Constructivist:* Through question asking, visitors are free to explore the exhibit to find the answers.

5. Please elaborate on how you see these theories implemented in the armoire exhibit and do they add to or detract from the exhibit? Why or why not?

6. Please provide any additional comments or feedback you think necessary.

7. Based on the feedback you provided in this questionnaire, please rank the armoire interactive as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

Overall Assessment of Preservation	1	2	3	4	5
Overall Assessment of Interactive Elements	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	4	5

## **Text Panels**

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the text panels are adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?
  
2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the text panels.
  
3. Design: How do material, light and color represented in the text panels communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

## Text Panels

### Theories of Learning:

4. Following is a brief description of four theories of learning. Based on these descriptions please circle the theory or theories you see represented in the text panels overall?

*Stimulus-response:* Using positive and negative reinforcement to educate. Pavlov's dog is an example, as well as the positive reinforcement of receiving an A on an assignment in school, or a raise from your boss for a job well done.

*Expository-didactic:* Memorization and repetition are used for knowledge retention. Flash cards and repetitive drills in math class are examples of this. Often this theory is manifest through linear designs, usually sequential where one item builds on the knowledge gained in the previous.

*Discovery:* People learn by discovering answers and ideas on their own. This is manifest in open floor plans with little direction imposed on the individual.

*Constructivist:* Through question asking, visitors are free to explore the exhibit to find the answers.

5. Please elaborate on how you see these theories implemented in the text panels and do they add to or detract from the exhibit? Why or why not?

6. Please provide any additional comments or feedback you think necessary.

7. Based on the feedback you provided in this questionnaire, please rank the text panels as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

Overall Assessment of Preservation	1	2	3	4	5
Overall Assessment of Interactive Elements	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	4	5



## Hologram

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the hologram is adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?
  
2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the hologram.
  
3. Design: How do material, light and color represented in the hologram communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

## Hologram

### Theories of Learning:

4. Following is a brief description of four theories of learning. Based on these descriptions please circle the theory or theories you see represented in the hologram interactive overall?

*Stimulus-response:* Using positive and negative reinforcement to educate. Pavlov's dog is an example, as well as the positive reinforcement of receiving an A on an assignment in school, or a raise from your boss for a job well done.

*Expository-didactic:* Memorization and repetition are used for knowledge retention. Flash cards and repetitive drills in math class are examples of this. Often this theory is manifest through linear designs, usually sequential where one item builds on the knowledge gained in the previous.

*Discovery:* People learn by discovering answers and ideas on their own. This is manifest in open floor plans with little direction imposed on the individual.

*Constructivist:* Through question asking, visitors are free to explore the exhibit to find the answers.

5. Please elaborate on how you see these theories implemented in the hologram and do they add to or detract from the exhibit? Why or why not?

6. Please provide any additional comments or feedback you think necessary.

7. Based on the feedback you provided in this questionnaire, please rank the hologram as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

Overall Assessment of Preservation	1	2	3	4	5
Overall Assessment of Interactive Elements	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	4	5

## Display Cases

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the display cases are adequately protected?      YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?
  
2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the display cases?
  
3. Design: How do material, light and color represented in the display cases communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

## Display Cases

### Theories of Learning:

4. Following is a brief description of four theories of learning. Based on these descriptions please circle the theory or theories you see represented in the display cases overall?

*Stimulus-response:* Using positive and negative reinforcement to educate. Pavlov's dog is an example, as well as the positive reinforcement of receiving an A on an assignment in school, or a raise from your boss for a job well done.

*Expository-didactic:* Memorization and repetition are used for knowledge retention. Flash cards and repetitive drills in math class are examples of this. Often this theory is manifest through linear designs, usually sequential where one item builds on the knowledge gained in the previous.

*Discovery:* People learn by discovering answers and ideas on their own. This is manifest in open floor plans with little direction imposed on the individual.

*Constructivist:* Through question asking, visitors are free to explore the exhibit to find the answers.

5. Please elaborate on how you see these theories implemented in the display cases and do they add to or detract from the exhibit? Why or why not?

6. Please provide any additional comments or feedback you think necessary.

7. Based on the feedback you provided in this questionnaire, please rank the display cases as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

Overall Assessment of Preservation	1	2	3	4	5
Overall Assessment of Interactive Elements	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	4	5

**APPENDIX J: TABLES SUMMARIZING DATA**

**Preservation/ Maintenance within the Dolley Madison exhibit**

	<b>Design Professionals (n=3)</b>	<b>Museum Professionals (n=3)</b>	<b>Director of Public History (n=1)</b>
Calling Card & Letter Computer Interactive	Redesign display shelf for calling cards, seems like computers would need routine maintenance and occasional replacement	Adequately maintained, good opportunity for museum to collect visitor email addresses, how many people use this at one time? Good way to tell history, need to show construction details	Adequately maintained
Armoire	Adequately preserved, light specification desired	Is case big enough for dress with train? Is rotating safe for dress?	Adequately preserved
Text Panels	Not adequately preserved, need to address materials, construction, and mounting	Use exhibit grade finish on text panels, want drawings of panel design	Adequately preserved
Display Cases	Adequately preserved if heat and light in closed cases are addressed properly	Adequately preserved, list materials and steps needed to meet museum standards	Adequately preserved
Hologram	Seems more like a maintenance issue	Not questioned on this topic	Not questioned on this topic

*Table J.1: Chart summarizing questionnaire data gathered on preservation and maintenance within the exhibit space*

**Communication of Big Idea within the Dolley Madison exhibit**

	<b>Design Professionals (n=3)</b>	<b>Museum Professionals (n=3)</b>	<b>Director of Public History (n=1)</b>
Calling Card & Letter Interactive	Effective use of comparative contrast, shows feminine role well	need to read text to answer, expand the interactive, text too long, font too small	Calling cards: serve as good representation of female social power Letters: videos might not get idea of power across
Armoire	Shows how women are seen, readdress design of armoire, what is significance of dress by itself, consider height of dress	Need text interpreting dress, add sound, good opportunity for visitor to see Mrs. Madison's style	Need text to explain how dress represents power
Text Panels	Very good use of man/woman comparison, why all 20 <sup>th</sup> Century First Ladies beyond Madison? Cannot read text to assess, check size and height of text	Comparing Dolley and James and Dolley and First Ladies shows big idea, want to read text, themes of politics calling cards and First Ladies should be more focused on Dolley	Not provided with text cannot assess, like idea of linking Dolley to other First Ladies
Display Cases	Contents contribute to themes cases do not	These represent her entertaining? Selection of objects should illustrate theme/ big idea/ title of case	Will there be text with dishes to explain dishes and power
Hologram	Animates the space, big idea expressed through her appearing and dress, what size is the hologram (larger than life?), very powerful idea	Not questioned on this topic	Not questioned on this topic

*Table J.2: Chart summarizing questionnaire data gathered on communication of the big idea within the exhibit space*

**Materials, Light, & Color within the Dolley Madison exhibit**

	<b>Design Professionals (n=3)</b>	<b>Museum Professionals (n=3)</b>	<b>Director of Public History (n=1)</b>
Calling Card & Letter Interactive	Pink doesn't address power, colors unify the exhibit, effective use of horizontal band, more decisions on lighting needed	People are drawn to technology, need lighting specification, push materials further, too much text, font too small	Calling card: attractive Letter: video helps make stories engaging, video may detract from letters
Armoire	Confusing show of power compared to other cases, need more info on armoire interior materials and colors, is this a period armoire, uses light in a powerful way.	Good interaction allowing visitors to discover dress, consider motion detector for lights or auto close mechanism on doors, think about door maintenance	Use real dress not reproduction, rotation and intermittent light work well with this
Text Panels	Lighting needed, consistent mounting height needed, text size too small, how does pink in graphics relate to red in room, text panels need to be proportionate to each other and room,	Shorten text length, place big idea in large bold text, how does pink show power, use exhibit text standards	Use of Latrobe symbol nice, overall too much text for visitors to read
Display Cases	All need design modifications, details, cohesive design between three cases and armoire (same wood), need lighting specification Consider angled computer display for calling cards	Well placed, can you use wall above dishes case for photograph relating case to rest of exhibit	Thought-through design system, showing real letters very good way to illuminate stories
Hologram	Hologram utilizes light and color, would be more effective if Dolley was a "dynamic" figure	Not questioned on this topic	Not questioned on this topic

*Table J.3: Chart summarizing questionnaire data gathered on materials, light, and color within the exhibit space*

### Learning Theories Identified from the Dolley Madison Exhibit

	<b>Design Professionals (n=3)</b>	<b>Museum Professionals (n=3)</b>	<b>Director of Public History (n=1)</b>
Calling Card & Letter Interactive	S, and D dominant, also some E and C	S, D, and some C	S, E, D, C
Armoire	D and C dominant, some S	D dominant and some S	S, E, D, C
Text Panels	D and E dominant, some C and S	E dominant and some D	E
Display Cases	E and D dominant	D and some C	C
Hologram	D and S dominant, some E	Not questioned on this topic	Not questioned on this topic

S = Stimulus-response, E = Expository-didactic, D = Discovery, C = Constructivist

*Table J.4: Chart summarizing questionnaire data gathered on learning theories within the exhibit space*

### Overall Assessment of the Dolley Madison Exhibit

	<b>Design Professionals (n=3) Mean Score</b>	<b>Museum Professionals (n=3) Mean Score</b>	<b>Director of Public History (n=1) Mean Score</b>
Calling Card & Letter Interactive	Preservation: 3 Interactives: 3 Interpretation: 3.5	Maintenance: 4 Interactives: 3 Interpretation: 3	Maintenance: 5 Interactives: 4 Interpretation: 3
Armoire	Preservation: 4 Interactives: 2.8 Interpretation: 3	Preservation: 2.7 Interactives: 2.7 Interpretation: 3	Preservation: 5 Interactives: 4 Interpretation: 3
Text Panels	Preservation: 2.3 Interactives: 2.7 Interpretation: 3.3	Preservation: 4 Interactives: 2 Interpretation: 2.7	Preservation: 5 Interactives: N/A Interpretation: 4
Display Cases	Preservation: 4.3 Interactives: 3.2 Interpretation: 3.3	Preservation: 3 Interactives: N/A Interpretation: 3	Preservation: 5 Interactives: N/A Interpretation: 3
Hologram	Preservation: 4 Interactives: 3.5 Interpretation: 3.7	Not questioned on this topic	Not questioned on this topic

*Table J.5: Chart summarizing questionnaire data gathered on the overall assessment of the exhibit space. These rankings were based on a five point Likert scale, with 1 being insufficient needs redesigning, 3 being some modifications necessary, and 5 being excellent meets needs of exhibit.*



## APPENDIX K: UNC-G FACULTY QUESTIONNAIRE RESPONSES

MARCH 27, 2007

**Patrick Lee Lucas, Assistant Professor, Interior Architecture**  
**Novem Mason, Professor, Interior Architecture**  
**Jo Leimenstoll, Professor, Interior Architecture**

### Calling Card and Letter Interactive Computer Exhibits

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the computers in this display are adequately protected? YES \_\_\_\_\_ NO \_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

**Novem:** Built in LCD – Built into case piece or redesigned display shelf

**Patrick:** Not sure what protection needs to be practiced

**Jo:** Changed “preservation” above to “maintenance”  
Seems like the computer screen and keyboard would need routine maintenance and occasional replacement.

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the calling card and letter interactive exhibits.

**Novem:** Effective use of comparative contrast!

**Patrick:** Calling card: all female activity from what you show but actually worked across genders  
Letters: not sure how they contribute to the theme of First Lady as a party planner

**Jo:** These interactive elements seem more about her more social role – the hostess of the nation. I am in conflict over the choice of pink as a key color – can argue it both ways but it is a prominent part of the calling card element. May need a stronger rationale for this when presenting so we are convinced.

3. Design: How do material, light and color represented in this exhibit communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

**Novem:** Improved! Good room color palate effective use of rich red horizontal band to utilize spaces and beginning to unite exhibit cases. More work needed here.

**Patrick:** An implicit assumption that pink is feminine and as the overall color of exhibit...doesn't really address power – maybe that is more about your PowerPoint than anything.

**Jo:** I feel the color choices relating to the painting unify the exhibit and consequently help draw attention t the exhibit elements. As we discussed in our meeting the color treatment could be strengthened. Need more decisions on lighting for text panels and displays (besides dress in armoire) to tell if lighting helps focus on interactive elements.

Theories of Learning:

4. Following is a brief description of four theories of learning. Based on these descriptions please circle the theory or theories you see represented in the calling card and letter interactive computer exhibits?

*Stimulus-response:* Using positive and negative reinforcement to educate. Pavlov’s dog is an example, as well as the positive reinforcement of receiving an A on an assignment in school, or a raise from your boss for a job well done.

*Expository-didactic:* Memorization and repetition are used for knowledge retention. Flash cards and repetitive drills in math class are examples of this. Often this theory is manifest through linear designs, usually sequential where one item builds on the knowledge gained in the previous.

*Discovery:* People learn by discovering answers and ideas on their own. This is manifest in open floor plans with little direction imposed on the individual.

*Constructivist:* Through question asking, visitors are free to explore the exhibit to find the answers.

5. Please elaborate on how you see these theories implemented in the calling card and letter interactive exhibits and do they add to or detract from the exhibit? Why or why not?

**Novem:** Stimulus-response and discovery are effective less so for expository-didactic and constructivist - but this is OK!

**Patrick:** Discovery and constructivist. Says constructivist comes closest to this but no interpretation to help with learning.

**Jo:** Circled Stimulus-response, expository-didactic, and discovery and wrote “key” beside discovery.

I see discovery through writing their own calling card as a key theory there is also some of the stimulus-response in the interactive as well as expository-didactic especially with the sample letters. Doesn’t seem to fit constructivist theory.

6. Please provide any additional comments or feedback you think necessary.

**Novem:** Need for effective lighting for all visual task and discovery! Location is awkward!

**Patrick:** Height of computer screen on desk... no chair; height of computer screen on wall/videos

**Jo:** The calling card and letter are good, solid interactive exercises. Would like to see “desk” base and computer screen modified as discussed

7. Based on the feedback you provided in this questionnaire, please rank the calling card and letter interactive computer exhibits as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Novem:**

Overall Assessment of Preservation	1	2	3	<b>4</b>	5
Overall Assessment of Interactive Elements	1	2	<b>3</b>	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	<b>4</b>	5

**Patrick:**

Overall Assessment of Preservation	1	<b>2</b>	3	4	5
Overall Assessment of Interactive Elements	1	<b>2</b>	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	<b>3</b>	4	5

**Jo:**

Overall Assessment of Preservation Responded” no relevant”	1	2	3	4	5	
Overall Assessment of Interactive Elements	1	2	3	<b>4</b>	5	
Overall Assessment of Interpretation of Dolley Madison	1	2	3	<b>X</b>	4	5

## Armoire Interactive

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the artifacts in this case are adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

**Novem:** checked yes above

**Patrick:** Checked yes above

What type of lights within armoire – how much heat? As long as this is addressed  
What about wear and tear on putting the dress on the form?

**Jo:** checked yes above

The idea of protective glass, limited light exposure and rotating dress all seem very preservation minded.

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the armoire exhibit.

**Novem:** Good – exhibit of dresses – how women are seen!  
It is the armoire – case that needs to be readdressed!

**Patrick:** Not sure what a dress says by itself – yes she got dressed for parties – what is the significance here.

**Jo:** The power of the visual image of the dress seems to bring her presence into the exhibit (as does the hologram). The height of the dress in relation to those viewing it seems important to consider.

3. Design: How do material, light and color represented in the armoire exhibit communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

**Novem:** Not well – too confusing with or compared to other exhibition case work!

**Patrick:** Not enough info about what happens here...especially interior view of traditional/period view of this cabinet

**Jo:** As discussed the detailing of the armoire and the color of its interior panels could be modified/ designed to focus more dramatically on the dress. It sounds like this display utilizes light in a powerful way.

Theories of Learning:

4. Following is a brief description of four theories of learning. Based on these descriptions please circle the theory or theories you see represented in the armoire exhibit?

*Stimulus-response:* Using positive and negative reinforcement to educate. Pavlov's dog is an example, as well as the positive reinforcement of receiving an A on an assignment in school, or a raise from your boss for a job well done.

*Expository-didactic:* Memorization and repetition are used for knowledge retention. Flash cards and repetitive drills in math class are examples of this. Often this theory is manifest through linear designs, usually sequential where one item builds on the knowledge gained in the previous.

*Discovery:* People learn by discovering answers and ideas on their own. This is manifest in open floor plans with little direction imposed on the individual.

*Constructivist:* Through question asking, visitors are free to explore the exhibit to find the answers.

5. Please elaborate on how you see these theories implemented in the armoire exhibit and do they add to or detract from the exhibit? Why or why not?

**Novem:** Good example of discovery!

**Patrick:** circled stimulus-response and wrote "to open it" beside circle. Also circled discovery and constructivist.

Nice that it opens to reveal the dress

**Jo:** circled discovery and constructivist

This is not totally clear in terms of theories of learning to me. May be a combo of free to explore/ open the doors and see the dress. More of the latter two on the list I guess.

6. Please provide any additional comments or feedback you think necessary.

**Novem:** Armoire design does not relate to the exhibit spaces

**Patrick:** no response

**Jo:** Could use some modification in resolving how doors to armoire work within the space and what the interior panels and door panels (outside view) look like.

7. Based on the feedback you provided in this questionnaire, please rank the armoire interactive as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Novem:**

Overall Assessment of Preservation	1	2	3	4	<b>5</b>
Overall Assessment of Interactive Elements	1	2	3	<b>4</b>	5
Overall Assessment of Interpretation of Dolley Madison	1	2	<b>3</b>	4	5

**Patrick:**

Overall Assessment of Preservation	1	<b>2</b>	3	4	5
Overall Assessment of Interactive Elements	<b>1</b>	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	<b>2</b>	3	4	5

**Jo:**

Overall Assessment of Preservation	1	2	3	4	<b>5</b>	
Overall Assessment of Interactive Elements	1	2	3	<b>X</b>	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	<b>4</b>	5	

## Text Panels

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the text panels are adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

**Novem**: Checked no above

Need to be made of more ??? free materials – not paper!

**Patrick**: checked no above

Will need to be routinely replaced because of fading would need to be on a surface more sturdy than paper. How mounted to wall?

**Jo**: checked no above

Doesn't seem that you have given much thought to the actual screening/ printing of the panels and their construction and mounting.

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the text panels.

**Novem**: very good – man/ woman comparison describing the effectiveness of each!

**Patrick**: different means of politicking – a strong theme

All 20<sup>th</sup> Century First Ladies beyond Madison – why? Other 19<sup>th</sup> Century wives played important roles in shaping politics

Don't have access to text

**Jo**: Seems like there is plenty of text area to reinforce these ideas. Want to be sure the size of the text and height of the text makes it easy to read (also lighting is critical.)

3. Design: How do material, light and color represented in the text panels communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

**Novem**: Better/ any lighting needed!

Need consistent mounting height for reading

Is the text large enough

Many different sizes! – what unites them?

**Patrick:** Not enough design elements hold together the text panels....  
How does pink work with red in exhibit?  
Text panel size needs to be proportionate

**Jo:** You could make more decisions regarding material, light, and color to take these to a more detailed design level. Really think the material question would be easy to decide – lighting is a little more challenging but certainly seems like it could be decided without major revision.

Theories of Learning:

4. Following is a brief description of four theories of learning. Based on these descriptions please circle the theory or theories you see represented in the text panels overall?

*Stimulus-response:* Using positive and negative reinforcement to educate. Pavlov's dog is an example, as well as the positive reinforcement of receiving an A on an assignment in school, or a raise from your boss for a job well done.

*Expository-didactic:* Memorization and repetition are used for knowledge retention. Flash cards and repetitive drills in math class are examples of this. Often this theory is manifest through linear designs, usually sequential where one item builds on the knowledge gained in the previous.

*Discovery:* People learn by discovering answers and ideas on their own. This is manifest in open floor plans with little direction imposed on the individual.

*Constructivist:* Through question asking, visitors are free to explore the exhibit to find the answers.

5. Please elaborate on how you see these theories implemented in the text panels and do they add to or detract from the exhibit? Why or why not?

**Novem:** Circled none above  
Some of all – mostly the first three! Effective

**Patrick:** Circled discovery and constructivist  
I suppose reading is constructivist...

**Jo:** circled expository-didactic  
This seems more expository - providing interesting useful info.

6. Please provide any additional comments or feedback you think necessary.

**Novem:** Some how alter the design of these elements to become an integral part of the exhibit design!

**Patrick:** Height of text panels overall  
Not enough info to evaluate content of text panels to assess the theme of exhibit



**Jo:** no response

7. Based on the feedback you provided in this questionnaire, please rank the text panels as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Novem:**

Overall Assessment of Preservation	1	<b>2</b>	3	4	5
Overall Assessment of Interactive Elements	1	2	<b>3</b>	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	<b>4</b>	5

**Patrick:**

Overall Assessment of Preservation	1	2	<b>3</b>	4	5
Overall Assessment of Interactive Elements	<b>1</b>	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	<b>1</b>	2	3	4	5

**Jo:**

Overall Assessment of Preservation	1	<b>2</b>	3	4	5
Overall Assessment of Interactive Elements	1	2	3	<b>4</b>	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	4	<b>5</b>

## Hologram

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the hologram is adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

**Novem:** checked yes above  
No response

**Patrick:** did not check anything  
Responded “not applicable”

**Jo:** placed a question mark beside yes above  
This seems more a technical maintenance question.

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the hologram.

**Novem:** Expressed through her appearing and dress and what she is saying?

**Patrick:** animates the space, brings Dolley to life

**Jo:** I feel her presence as one enters the exhibit would/could be powerful. It would be great to see this idea more directly communicated in your graphics. The size of the hologram and whether she is larger than life seems a huge factor to consider.

3. Design: How do material, light and color represented in the hologram communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

**Novem:** Would be more effective if Dolley was a “dynamic” figure

**Patrick:** ??

**Jo:** The hologram would utilize light and color. I don’t know what sort of costume/ dress she would be wearing but I assume it would reinforce her role as a hostess

Theories of Learning:

4. Following is a brief description of four theories of learning. Based on these descriptions please circle the theory or theories you see represented in the hologram interactive overall?

*Stimulus-response:* Using positive and negative reinforcement to educate. Pavlov's dog is an example, as well as the positive reinforcement of receiving an A on an assignment in school, or a raise from your boss for a job well done.

*Expository-didactic:* Memorization and repetition are used for knowledge retention. Flash cards and repetitive drills in math class are examples of this. Often this theory is manifest through linear designs, usually sequential where one item builds on the knowledge gained in the previous.

*Discovery:* People learn by discovering answers and ideas on their own. This is manifest in open floor plans with little direction imposed on the individual.

*Constructivist:* Through question asking, visitors are free to explore the exhibit to find the answers.

5. Please elaborate on how you see these theories implemented in the hologram and do they add to or detract from the exhibit? Why or why not?

**Novem:** Effective using stimulus-response and discovery and some expository-didactic. Less so for constructivist

**Patrick:** circled discovery above  
No response

**Jo:** circled expository-didactic above  
It seems that the way this is interactive is that one can walk through it (?)  
I would think it would be expository in presenting the figure.

6. Please provide any additional comments or feedback you think necessary.

**Novem:** Carefully controlled lighting needed here!

**Patrick:** no response

**Jo:** this is my favorite part (along with the dress in the armoire). I would love to see it.

7. Based on the feedback you provided in this questionnaire, please rank the hologram as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Novem:**

Overall Assessment of Preservation	1	2	3	<b>4</b>	5
Overall Assessment of Interactive Elements	1	2	<b>3</b>	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	<b>4</b>	5

**Patrick:**

Overall Assessment of Preservation Responded "N/A"	1	2	3	4	5
Overall Assessment of Interactive Elements Responded "N/A"	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	<b>3</b>	4	5

**Jo:**

Overall Assessment of Preservation Responded "? N/A"	1	2	3	4	5
Overall Assessment of Interactive Elements	1	2	3	<b>4</b>	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	<b>4</b>	5

## Display Cases

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the display cases are adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

**Novem:** checked yes above  
For the most part!

**Patrick:** checked yes above  
Although concurred about heat and light in enclosed cases

**Jo:** checked yes above

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the display cases?

**Novem:** All helpful

**Patrick:** The contents contribute to the themes... the cases do not.  
How are the contents protected actually?

**Jo:** Seems the table setting addresses her hostess role in a literal way. The letters speak to her less deferential role.

3. Design: How do material, light and color represented in the display cases communicate the big idea, "Dolley Madison: Power and the Party Planner", and help focus attention on the interactive elements?

**Novem:** All need design modifications – more integral form, detail, etc!

**Patrick:** Exhibit cases need to come more together in terms of design  
Contemporary vs. historical – not sure what the message is from these various elements

**Jo:** Not much info on specific lighting. As discussed. Conveying the materials and detailing of the contemporary displays would help unify the design. The computer related display area might work better if the screen were incorporated into an angled display.

Theories of Learning:

4. Following is a brief description of four theories of learning. Based on these descriptions please circle the theory or theories you see represented in the display cases overall?

*Stimulus-response:* Using positive and negative reinforcement to educate. Pavlov's dog is an example, as well as the positive reinforcement of receiving an A on an assignment in school, or a raise from your boss for a job well done.

*Expository-didactic:* Memorization and repetition are used for knowledge retention. Flash cards and repetitive drills in math class are examples of this. Often this theory is manifest through linear designs, usually sequential where one item builds on the knowledge gained in the previous.

*Discovery:* People learn by discovering answers and ideas on their own. This is manifest in open floor plans with little direction imposed on the individual.

*Constructivist:* Through question asking, visitors are free to explore the exhibit to find the answers.

5. Please elaborate on how you see these theories implemented in the display cases and do they add to or detract from the exhibit? Why or why not?

**Novem:** none circled above

All are used but not by all display cases – which is OK!

**Patrick:** none circled above

passive reading here... no real chance to interact...

**Jo:** circled expository-didactic and discovery

Seems pretty straight forward to me as an expository element – for all three displays. The connection to the computer screens seems to add a discovery focus to the displays as well.

6. Please provide any additional comments or feedback you think necessary.

**Novem:** Design continuity!

**Patrick:** How easy is to remove, clean, address curatorial concerns of artifacts in cases

**Jo:** The artifacts are protected. The relation of the two displays to computer screens makes them more interactive

7. Based on the feedback you provided in this questionnaire, please rank the display cases as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Novem:**

Overall Assessment of Preservation	1	2	3	<b>4</b>	5
Overall Assessment of Interactive Elements	1	2	<b>3</b>	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	<b>4</b>	5

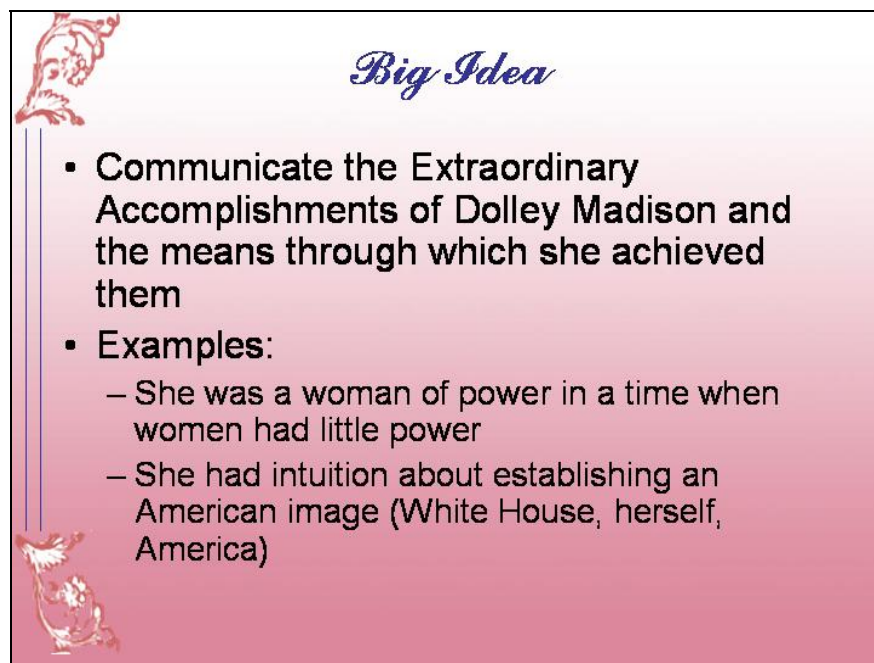
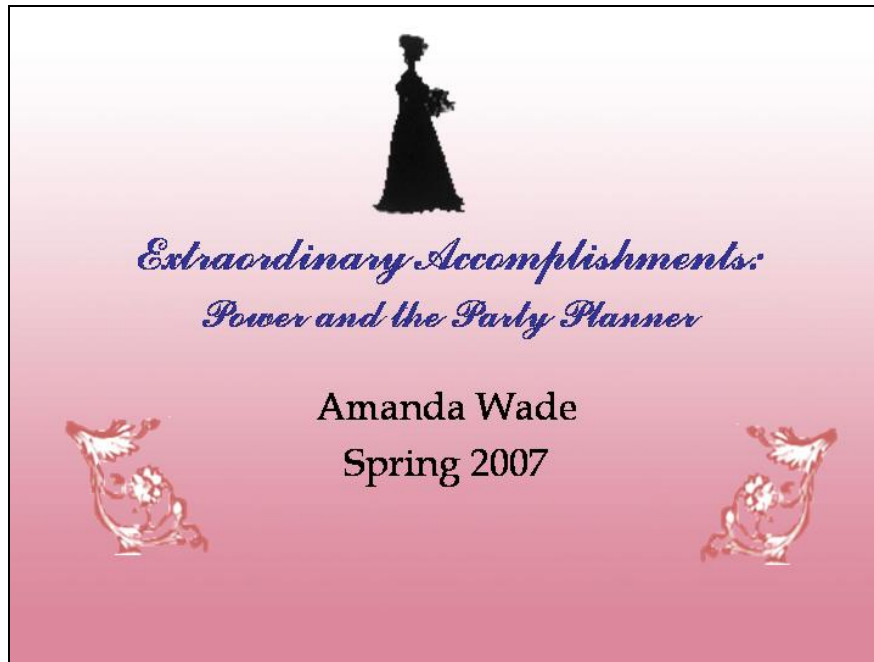
**Patrick:**

Overall Assessment of Preservation	1	2	3	<b>4</b>	5
Overall Assessment of Interactive Elements	1	2	<b>3</b>	4	5
Overall Assessment of Interpretation of Dolley Madison	1	<b>2</b>	3	4	5

**Jo:**

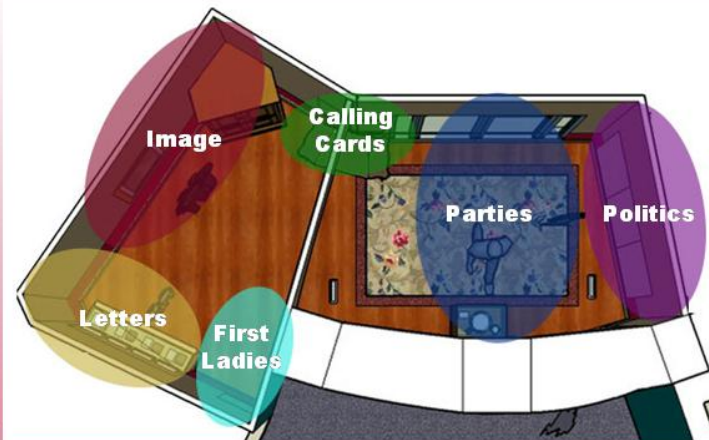
Overall Assessment of Preservation	1	2	3	4	<b>5</b>	
Overall Assessment of Interactive Elements	1	2	3	<b>X</b>	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	<b>4</b>	5	

## APPENDIX L: POWER POINT PRESENTATION IMAGES





## *Space Planning*



## *Questionnaire Topics*

- Calling Card and Letter Interactive Computer Exhibits
- Armoire Interactive
- Text Panels
- Hologram Interactive
- Display Cases

## *Calling Card Interactive*








- Computer Storage Inside Exhibit Case
- Touch Screen Data Entry
- Mrs. Madison Calls on You
- Web Link





## *Letter Interactive*


- Computer Storage Inside Exhibit Case
- Push Button Activation
- Choose Your Video
- Computer Video Interface



## *Armoire Interactive*

- Open Door Light Activation
- Dress Turns to Reveal all Sides



## *Text Panels*

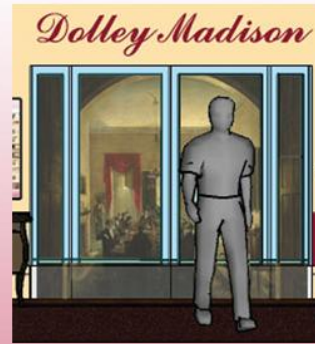






## Hologram

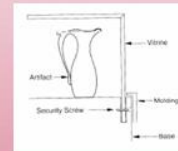
- Life-size Mrs. Madison Greets Visitors
- Simulates Hostess
- 3-D Holographic Image
- Visitors can Walk Through Mrs. Madison



## Display Cases



- Temperature and RH Monitored by Psychrometer and Hygrometer
- Cases Securely Locked





## APPENDIX M: GHM STAFF QUESTIONNAIRE RESPONSES

MARCH 30, 2007

**Adrienne Garwood, Assistant Curator of Exhibits**  
**Betty K. Phipps, Curator of Education**  
**Susan J. Webster, Registrar/ Curator of Costumes and Textiles**

### Calling Card and Letter Interactive Computer Exhibits

Please comment on the following areas:

1. Maintenance: Based on your knowledge of maintenance, do you feel the computers in this display are adequately maintained? YES \_\_\_\_\_ NO \_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

#### Calling Card:

**Betty K.:** Checked yes above. I really like the idea of allowing / inviting visitors to “design” their own calling cards and emailing it to their home computers for printing. Also, I appreciate the opportunity for us to collect additional email addresses.  
Room for just one person at a time?

**Adrienne:** Nothing checked above  
Is this a touch screen computer display? If so, then they are NOT given enough room for maintenance. Are they set into the wall? Are they flat screens? Where do the computer towers live? Not sure. Should show details.

**Susan:** Checked yes above  
For any of the electronic components that were presented I would normally expect to see alternatives based on budget. While it is never fun to have to consider this it becomes an integral part of any exhibit plan. The cost is greater than the original equipment purchase; it can involve changes in wiring, electrical load, and upkeep.

Throughout the exhibit interactive process I would like to see two things, alternatives to computer components and knowledge or what those would or could be. (Examples from other museums, and current thoughts from museum educators about what works and doesn't work.)

I would like to see a statement about audience focus and how the interactive might be used by young or older visitors.

I think the concept of creating a card after learning about them is exciting. I appreciated that not only would someone send it to themselves but that this could create a mailing opportunity for the museum. (I'm assuming a statement would be needed to ask for that permission).

Letter Interactive:

**Betty K.:** Is there room for 4 people to access this interactive at one time? What about a tour group of 10-15 adults or children?

**Adrienne:** Is this a touch screen computer display? If so, then they are NOT given enough room for maintenance. Are they set into the wall? Are they flat screens? Where do the computer towers live? Not sure. Should show details.

**Susan:** A great way to engage visitors is to hear history read using different voices. It is very important to know what a visitor is capable of handling. Studies provide us with information about the level of visitor “patience”, how long they will listen, stand, sit, read. This is imperative in presenting this type of interactive.

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the calling card and letter interactive exhibits.

Calling Card:

**Betty K.:** Without seeing the text, I cannot respond to this question. Does the label explain how calling cards were used at this time? Whom did she visit? Who visited Dolley? It was through these personal connections that she was able to wield her power!

**Adrienne:** Think this is a good start... Would have pushed it further. For example, what would you have said to Dolley (or asked) once you got to meet with her → expand the interactive.

**Susan:** I have not read the text for this exhibit so I can't really comment on the style of points that you raise about Dolley. Ex. Women did not participate in politics in a traditional way but the “parlor politics” approach would be interesting. The history or etiquette of the calling card is important and an interesting point to include.

Note: The text for these panels is entirely too long and the font too small. At this point in the exhibit I would expect research into label writing, exhibit copy, and again studies on visitor learning styles!

Text is too long and too small.

Letter Interactive:

**Betty K.:** Again, text would be helpful. The illustrations give us only a tiny bit of information. Is there only 1 letter/ category? Did I understand that visitors will use earphones to hear the



letters? Will it still work if 4 visitors want to access the same letters at the same time? Will letter begin again each time button is pushed? Letters chosen important to accomplishing goal.

**Adrienne:** Not sure of content of these letters... Are they interactive because you can listen to someone reading the letter? What is the visitor's participation? Not sure.

**Susan:** Text or audio may be too long. Selecting letters that offer contrast or attention to key historic events is good. Selecting the passages that make them special is important.

3. Design: How do material, light and color represented in this exhibit communicate the big idea, "Dolley Madison: Power and the Party Planner", and help focus attention on the interactive elements?

#### Calling Card:

**Betty K.:** People are drawn toward technology – period  
Does fading pink represent power and parties? I don't know  
The space for the exhibit is naturally dark, until I understand how artificial lights will be directed, I'm not sure I can comment.

**Adrienne:** Light → None represented, not sure  
Color → Feminine – how would this work for male visitors? It suggests that only women would have participated.  
Material → would push further – meant to be a piece of furniture? What type of wood?

**Susan:** The case design is addresses security and balance of activities. Is there enough space for one or two visitors as dictated by established standards? For the panel multiplicity of textures and images might be too busy, consider larger image or creating a focal point with graphics. Limit number of calling card designs and there is absolutely too much text and the font is not a standard.

#### Letter Interactive:

**Betty K.:** People are drawn toward technology – period  
Does fading pink represent power and parties? I don't know  
The space for the exhibit is naturally dark, until I understand how artificial lights will be directed, I'm not sure I can comment.

**Adrienne:** Light → No special treatment, not sure  
Color → Nice graphic background to touch screens, could this appear less static?

**Susan:** Larger image stronger focal point, font size. Visitor space should meet the standards if four individuals might be at this case/station at one time.

Note: There are plenty of publications about exhibit design, visitor needs, font size, learning styles. Ex. Title, sub title, bold 1 or 2 sentence then maybe additional 75 words. This provides



label copy for every visitor, the one who just wants to know what they're looking at, the one that wants to know why and the one who wants to know even more. There is a limit on number of words for most any publication and there are accepted font sizes to fit visitor fatigues and ADA requirements.

4. Please provide any additional comments or feedback you think necessary.

**Betty K.:** Cost – What is it for each interactive?

Maintenance - Will these be easily repaired if something malfunctions? Can they be reprogrammed for other letters, if you should want to rotate what you offer visitors?

**Adrienne:** I like that an angle for better viewing was used in both displays. What determined this angle?

How tall are they? Were exhibits standards researched to help develop? Not discussed  
Like the idea of emailing the calling card and BRILLIANT to add them to GHM membership list. Well done.

**Susan:** I would like to have seen a bibliography of resources.

I would like to have seen your information on ADA requirements, alternatives to sound and alternatives to sight. Height of cases. What considerations were taken into account?

Presentation was nice and provided a number of visual but I wonder if the program used to create the panels etc. is the most current. Perhaps software that provides more options for lighting etc.

There are exciting innovative ideas that could be developed more. The context and ideas are on target however I think the presentation of the material needs to reflect an understanding of museum exhibits including security, text presentation and visitor needs.

Design/ exhibit panels need work

5. Based on the feedback you provided in this questionnaire, please rank the calling card and letter interactive computer exhibits as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Betty K.**

Overall Assessment of Preservation Response: "N/A"	1	2	3	4	5
Overall Assessment of Interactive Elements	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison Response: "Can't respond without seeing the content"	1	2	3	4	5

**Adrienne**

Overall Assessment of Maintenance	1	2	3	<b>4</b>	5
Overall Assessment of Interactive Elements	1	<b>2</b>	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	<b>3</b>	4	5

**Susan:**

Overall Assessment of Maintenance	1	2	3	<b>4</b>	5
Overall Assessment of Interactive Elements	1	2	<b>3</b>	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	<b>3</b>	4	5

## Armoire Interactive

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the artifacts in this case are adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

**Betty K.:** Put a question mark in yes above.

Idea is good.

Is space within the armoire adequate to hold a dress with its train?

Even if we were to use one of the reproductions currently on exhibit, would it be safe for the dress to rotate? How would the train be safe from getting caught or becoming tangled?

**Adrienne:** checked yes above

Is there acrylic behind the doors on the armoire? If yes, then I think there would be adequate preservation.

Lighting to turn on/off...good idea! I want to see this happening.. an animation possibly.

Spec the lights – type, wattage, how to install.

Is the armoire large enough to hold a dress with train?

Would minimize rotating movement, for preservation.

**Susan:** I think you considered protection from light and handling. The idea of the piece rotating is creative. However, this type of movement is not always considered safe for some fragile textile pieces and I'm not sure the dress would fit and rotate in the depth of the case piece you designed.

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the armoire exhibit.

**Betty K.:** Obviously, anyone who owned, wore a dress like this is important.

**Adrienne:** Doesn't seem to get the point across, she is still not heard, not seen. She's in an armoire! Perhaps let her speak with a recorded voice. Ambient sound... let her "step" out of the armoire, more action oriented.

**Susan:** I can't really address the content aspect not having read the interpretation for this particular case. Her style is important to note and the visitor would want to see this type of costume.

3. Design: How do material, light and color represented in the armoire exhibit communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

**Betty K.:** This sounds good. I like the fact that visitors are invited to open the armoire and then light comes on lonely when doors are pushed open. Also, a motion detector in case doors are not closed or automatic door closings might be important.

**Adrienne:** Not sure → how does a visitor know to open it? Some signage or invitation would help.

Materials → Is this a historic reproduction? What style, material? Who would make... maybe High Point tie in.

How would the armoire functionally close?

How would the rotating mechanism work?

Show details

**Susan:** The design is innovative and provides the visitor with a lo-tech, discovery, or exploring feeling when opening the armoire to see the treasure inside. The maintenance of the doors, the additional vibration or movement they might cause when being opened and closed would be a consideration. An alternative could be motion light or a button that could illuminate the case.

4. Please provide any additional comments or feedback you think necessary.

**Betty K.:** Is there a label? When, where did Dolley wear this dress? The settings in which the dress was worn as well as how she acquired her wardrobe- all are important part of her story.

Cost?

Size? Dimensions? Does it fit well into the allotted space – or will it become an obstacle to steer around?

**Adrienne:** Would like to see details of this... could be interesting with further development.

Would need further explanation about the dress...context, time, etc. How does this one dress represent her?

Would this be a reproduction gown?

**Susan:** No response

5. Based on the feedback you provided in this questionnaire, please rank the armoire interactive as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Betty K.:**

Overall Assessment of Preservation	1	<b>2</b>	3	4	5
Overall Assessment of Interactive Elements	1	2	<b>3</b>	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	<b>3</b>	4	5

**Adrienne:**

Overall Assessment of Preservation	1	2	<b>3</b>	4	5
Overall Assessment of Interactive Elements	1	<b>2</b>	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	<b>3</b>	4	5

**Susan:**

Overall Assessment of Preservation	1	2	<b>3</b>	4	5
Overall Assessment of Interactive Elements	1	2	<b>3</b>	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	4	5

Response: “featuring the costume is important, the review of the interpretation should include the label text”

## Text Panels

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the text panels are adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

**Betty K.:** Checked yes above

Text panels, though necessary are not ever the most exciting element in an exhibit

**Adrienne:** Protection of text panels is not much of an issue.

It is safe to assume that people will touch panels. Should think about exhibits grade finishes to minimize wear and maximize life of panels.

Need to get rather close to them to read – text is quite small

**Susan:** I kind of addressed some of the panels in context with the interactives.

Preservation or maintenance, I know we asked about materials and mounting plan but there should be drawings of the panel design, like we saw for the display case.

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the text panels.

**Betty K.:** The subject matter – contrasting James and Dolley and comparing Dolley with subsequent, influential First Ladies – presents the big idea.

What does the text say? I cannot answer specifically without knowing

**Adrienne:** Not sure about content of text.

**Susan:** The overarching themes of politics, calling cards, and First Ladies should be more focused on Dolley. While the other First Ladies are recognizable and you may have compared and contrasted their tenure to Dolley, I think it introduces a theme that doesn't grasp your big idea. Consider another way to have this element included but use the space to focus on Dolley. It is a nice way of tying in people that many visitors will recognize.

3. Design: How do material, light and color represented in the text panels communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

**Betty K.:** The texts appear to contain lots of words. Could the same information be presented more concisely? It's doubtful that many visitors would linger long enough to read everything. Can information be presented in a hierarchy. Most important, big idea in large text with subsequent details in descending size.

**Adrienne:** Graphically relate to calling card interactive. Where did the pink come from? Would choose a color that represents POWER and less about femininity. Pull colors from party images. There are standards for text for exhibits. Were not represented in the design.

**Susan:** the panels, as discussed are not designed using established font size standards for text. I believe you need to re-write these panels after reading publications on exhibit text/label writing and familiarize yourself with standards that have been established. It is hard to whittle down the text but is a necessary aspect after so much research has been done.

I liked the design elements selected from Latrobe's work and the colors selected are pleasing to the eye. I would consider large focus images, larger and fewer design elements unless they become more like a border and make sure textures, such as the flower, the ribbons, etc are more consistent. Ex. In your panel on politics you selected some wonderful original print images and object images. I think they should be larger and Dolley and James images used once (why 2?). The text is too long and too small and the vertical borders are too overpowering. The titles across the top are too small. These are easily reworked because you have some excellent resources incorporated in them now.

4. Please provide any additional comments or feedback you think necessary.

**Betty K.:** Would some of the information be better presented in a handout for visitors to take home?

Rather than relying solely on photographs, could the panels be illustrated with real objects protected by small cases around them? Give panels a 3-D effect  
What is font size? Can panels be read without being on top of it?

**Adrienne:** How are the panels produced? Applied to wall? What size are they?

How tall are they off the ground?

Are kids age 4-12 expected to read this? Any kid friendly panels?

I appreciate the flower graphic and its history, would use more references such as this

**Susan:** See above

5. Based on the feedback you provided in this questionnaire, please rank the text panels as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Betty K:**

Overall Assessment of Preservation	1	2	3	4	<b>5</b>
Overall Assessment of Interactive Elements Response: question mark placed over word interactive	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	<b>4</b>	5

**Adrienne:**

Overall Assessment of Preservation	1	2	<b>3</b>	4	5
Overall Assessment of Interactive Elements Words “interactive elements” crossed out and “text” inserted by Adrienne	1	<b>2</b>	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	<b>2</b>	3	4	5

**Susan:**

Overall Assessment of Preservation	1	2	3	<b>4</b>	5
Overall Assessment of Interactive Elements Responded: “N/A”	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	<b>2</b>	3	4	5



## Display Cases

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the display cases are adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

**Betty K:** Checked yes above.

Is there more than 1? Or are you including the armoire and the area above the computers in calling card and letter interactives?

**Adrienne:** Changed heading for this section from “Display cases” to “Overall space”

No answer to first question

**Susan:** Nice design and the drawing provided the information needed for security and construction. There should be materials listed and steps that will be taken to assure the environment meets museum standards (no off gases, etc.)

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the display cases?

**Betty K:** Representative of her entertaining?

**Adrienne:** Also changed this question to apply to overall space not display cases.

Would like to have seen visuals to represent many ideas, light studies, animations of interactives, etc.

This is ultimately a very small space, I was expecting to see much more detail

**Susan:** The selection of objects should illustrate the theme/ big idea/ title of this case.

3. Design: How do material, light and color represented in the display cases communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

**Betty K:** Well-placed between doors

Seems to stand out by itself,

Is there anyway to use the wall above the case for a photograph relating what is in cases to rest of exhibit?

**Adrienne:** No response

**Susan:** No response

4. Please provide any additional comments or feedback you think necessary.

**Betty K:** Could more artifacts be included?

Size/ dimensions? How far will it stick out into space?

Overall concern- Size of space, can it be utilized by tour groups as currently laid out?

**Adrienne:** Would like to have a copy of thesis for GHM archives

**Susan:** Thank you for the opportunity to review your work. I believe you have introduced some innovative exhibit concepts and have a sense of the “big idea” for your exhibit.

I do believe that there should be schedules that provide a realistic cost for the exhibit, materials that provide detail information about a lighting plan, the process of using the Sergeant painting on glass doors and the image of Dolley (hologram), (cost , how they are created, what is involved, case studies from other institutions, effectiveness in the space suggested, etc.) Ex. If the painting you are suggesting is not in the public domain what is the cost to purchase rights of reproduction?

If presenting this idea to a museum for implementation many of these types of questions would be asked and need to be answered.

I would like to have seen the bibliography of research materials. I believe you need to provide a brief overview of the project, including the big idea, the anticipated audience and the audience you’d like to attract and in general an overview of your goals. You probably already have this type of written material and as someone reviewing the work I would like to have seen your “notebook” to glance through.

5. Based on the feedback you provided in this questionnaire, please rank the display cases as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Betty K:**

Overall Assessment of Preservation	1	2	3	<b>4</b>	5
Overall Assessment of Interactive Elements Underlined “Interactive” wrote N/A	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	<b>3</b>	4	5

**Adrienne:**

Overall Assessment of Preservation 1 2 3 4 5  
No response

Overall Assessment of Interactive Elements 1 2 3 4 5  
No response

Overall Assessment of Interpretation of Dolley Madison 1 2 3 4 5  
No response

**Susan:**

Overall Assessment of Preservation 1 **2** 3 4 5

Overall Assessment of Interactive Elements 1 2 3 4 5  
Response: "N/A, Text?"

Overall Assessment of Interpretation of Dolley Madison 1 2 **3** 4 5

## THEORIES OF LEARNING: BETTY K. PHIPPS

### Calling Card and Letter Interactive Computer Exhibits

#### Theories of Learning:

Following is a brief description of four theories of learning. Based on these descriptions please indicate the theory or theories you see represented in the calling card and letter interactive computer exhibits?

*Stimulus-response:* Using positive and negative reinforcement to educate. Pavlov's dog is an example, as well as the positive reinforcement of receiving an A on an assignment in school, or a raise from your boss for a job well done.

*Expository-didactic:* Memorization and repetition are used for knowledge retention. Flash cards and repetitive drills in math class are examples of this. Often this theory is manifest through linear designs, usually sequential where one item builds on the knowledge gained in the previous.

*Discovery:* People learn by discovering answers and ideas on their own. This is manifest in open floor plans with little direction imposed on the individual.

*Constructivist:* Through question asking, visitors are free to explore the exhibit to find the answers.

Please elaborate on how you see these theories implemented in the calling card and letter interactive exhibits and do they add to or detract from the exhibit? Why or why not?

#### Calling card:

Stimulus-response primarily seen through manipulation of computers but visitors receive a reward for what they do. That's what keeps their interest. It's fun and the reward is immediate (visual response) and later (email with printable calling card they created)

Discovery a little bit in that visitors can manipulate and create their own calling card. Visual discovery of what works with each design.

#### Letters:

This is hard to address, however constructivist is present in that visitors are free to explore and ask questions of themselves and peers. Seeking more information is constructivist feature of the letters.

## **Armoire Interactive**

### Theories of Learning:

Please elaborate on how you see these theories implemented in the armoire exhibit and do they add to or detract from the exhibit? Why or why not?

Discovery is strong assuming there is limited text here. Visitors have to open armoire to see and are actively discovering what's inside. We hope this will lead people to question things such as why did they wear dresses like this and how did they move and get out of carriages.

Stimulus-response seen some in that there is a "wow" factor. Folks are rewarded by getting to see this fabulous gown.

## **Text Panels**

### Theories of Learning:

Please elaborate on how you see these theories implemented in the text panels and do they add to or detract from the exhibit? Why or why not?

I guess expository-didactic. Not sure because I need to see the text. This is a way of sharing lots of information whether it's repeated from one panel to another. Idea of significant First Lady builds on legacy Dolley created. We hope visitor builds on this information.

Discovery is a little bit present. We hope visitors are discovering things.

## **Display Cases**

### Theories of Learning:

Please elaborate on how you see these theories implemented in the display cases and do they add to or detract from the exhibit? Why or why not?

Discovery: Purely visual experience due to limited text. We hope with limited text people would question lifestyle and customs of the time period and then appreciate what fine quality items people had then. Betty hopes that once visitors see the displays they would ask themselves questions and search the rest of the exhibit for the answers.

Constructivist a little: In the form of a guided tour the docent would pose the questions or have a written gallery guide/ handout to pose questions.

## APPENDIX N: PUBLIC HISTORY DIRECTOR QUESTIONNAIRE RESPONSES

APRIL 5, 2007

**Dr. Benjamin Filene, Associate Professor/ Director of Public History, UNC-G History Department.**

### Calling Card and Letter Interactive Computer Exhibits

Please comment on the following areas:

1. Maintenance: Based on your knowledge of maintenance, do you feel the computers in this display are adequately maintained? YES \_\_\_\_\_ NO \_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

#### Calling Card:

**Benjamin:** Checked yes above  
No response

#### Letter Interactive:

**Benjamin:** No response

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the calling card and letter interactive exhibits.

#### Calling Card:

**Benjamin:** I like calling attention to the calling card since it was part of a system of social power for women. In that sense it fits the theme well. I'm not sure visitors will catch the power theme, though – may just seem like a way to get an electronic souvenir. (Although text panels may explain that?)

Letter Interactive:

**Benjamin:** A bit hard to assess without seeing the letters, but the videos will need to work hard to make sure they don't just tell a descriptive story (eg, of 1814 fire) but link it to theme of Dolley of Power.

3. Design: How do material, light and color represented in this exhibit communicate the big idea, "Dolley Madison: Power and the Party Planner", and help focus attention on the interactive elements?

Calling Card:

**Benjamin:** Attractive. Depends on visitors having computers at home, which is iffy, especially for school groups.

Letter Interactive:

**Benjamin:** As planned, video might be a good way to make these stories engaging. To call attention to the letter as a primary source, I'd hope key excerpts will be highlighted along the way that illuminate the story.

4. Please provide any additional comments or feedback you think necessary.

**Benjamin:** no response

5. Based on the feedback you provided in this questionnaire, please rank the calling card and letter interactive computer exhibits as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Benjamin:**

Overall Assessment of Maintenance	1	2	3	4	<b>5</b>
Overall Assessment of Interactive Elements	1	2	3	<b>4</b>	5
Overall Assessment of Interpretation of Dolley Madison	1	2	<b>3</b>	4	5

**Armoire Interactive**

Please comment on the following areas:

- 1. Preservation: Based on your knowledge of preservation, do you feel the artifacts in this case are adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_ If not, what is lacking and what modifications do you recommend?

**Benjamin:** checked yes above

- 2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the armoire exhibit.

**Benjamin:** The challenge is how to make a dress more than just a dress. Will text or audio explain the link between fashion and status/power?

- 3. Design: How do material, light and color represented in the armoire exhibit communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

**Benjamin:** I like the rotation idea. I think that combined with intermittent light or closed doors, it could allow showing of real dress (not repro) which would be even more interesting

- 4. Please provide any additional comments or feedback you think necessary.

**Benjamin:** no response

- 5. Based on the feedback you provided in this questionnaire, please rank the armoire interactive as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Benjamin:**

Overall Assessment of Preservation	1	2	3	4	<b>5</b>
Overall Assessment of Interactive Elements	1	2	3	<b>4</b>	5
Overall Assessment of Interpretation of Dolley Madison	1	2	<b>3</b>	4	5



## Text Panels

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the text panels are adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

**Benjamin:** checked yes above

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the text panels.

**Benjamin:** Can't read the text here, but I like the idea of linking Dolley to other big-shot First Ladies.

3. Design: How do material, light and color represented in the text panels communicate the big idea, "Dolley Madison: Power and the Party Planner", and help focus attention on the interactive elements?

**Benjamin:** Attractive. I like the use of the Latrobe symbol (will that be explained to visitors?) I understand the theory behind the bulleted versus non-bulleted option, but I'd say too many words on all of these

4. Please provide any additional comments or feedback you think necessary.

**Benjamin:** For clarity in presenting, I'd suggest pairing the text panels with the interactive element they connect to, instead of treating them as a separate element.

5. Based on the feedback you provided in this questionnaire, please rank the text panels as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Benjamin:**

Overall Assessment of Preservation	1	2	3	4	<b>5</b>
Overall Assessment of Interactive Elements Responded: N/A not interactive, right?	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	3	<b>4</b>	5

## Display Cases

Please comment on the following areas:

1. Preservation: Based on your knowledge of preservation, do you feel the display cases are adequately protected? YES\_\_\_\_\_ NO\_\_\_\_\_  
If not, what is lacking and what modifications do you recommend?

**Benjamin:** checked yes above

2. The main message of the exhibit is to communicate the importance of Dolley Madison as a groundbreaking First Lady, hostess of a nation, and important public figure in a time when women were to be seen but not heard. For instance, women could not vote, they did not participate in politics, and they were not seen as equals to their male counterparts. In contrast Mrs. Madison was able to use her role as a woman and hostess for political leverage. Describe how you see this message represented in the display cases?

**Benjamin:** Same question as with the dress: will this just look like some dishes?

3. Design: How do material, light and color represented in the display cases communicate the big idea, “Dolley Madison: Power and the Party Planner”, and help focus attention on the interactive elements?

**Benjamin:** Attractive and thought-through design system.

I like the plan to show the real letters (right?) underneath the videos that illuminate their stories.

4. Please provide any additional comments or feedback you think necessary.

**Benjamin:** Same as with text panels – could integrate the cases into presentation of the other elements (although maybe you needed to treat them each as separate design issues?)

5. Based on the feedback you provided in this questionnaire, please rank the display cases as a whole on a scale from 1-5 with 1 being Insufficient needs redesigning, 3 being some modifications necessary, and 5 being Excellent meets needs of exhibit.

**Benjamin:**

Overall Assessment of Preservation	1	2	3	4	<b>5</b>
Overall Assessment of Interactive Elements Responded: N/A – cases not interactive?	1	2	3	4	5
Overall Assessment of Interpretation of Dolley Madison	1	2	<b>3</b>	4	5

## **Theories of Learning**

### **Calling Card**

**Benjamin:** Stimulus-response – visitors rewarded with computer response (I assume) when they successfully send cards to themselves

Discovery – Visitors have to discover how computers work (although that’s probably more Expository – following directions to make them work).

Expository – Text explains how calling cards worked?

Constructivist – Visitors could put any names and designs on their cards

### **Letter Interactive**

**Benjamin:** Stimulus-response – pushing button triggers stories?

Expository-didactic – Visitors listen to the stories

Constructivist – Visitors could lend the whole original letters and pull out different stories

### **Display Cases**

**Benjamin:** Constructivist – Visitors likely will tell stories about their own (or Grandma’s) old china, especially if there isn’t other didactic text

### **Armoire**

**Benjamin:** Stimulus-response – Opening doors rotates dress

Discovery – Visitors discover the armoire contains content/ object

Expository – Text explains?

Constructivist – Again, visitors will likely tell their own dress stories, although I’m not sure the exhibit is designed to encourage or take advantage of that.

### **Text Panels**

**Benjamin:** text panels use expository, I’d say. Curator has the knowledge, visitor “listens.”