



WORCESTER ART MUSEUM

MUSEUM VIEWING EXPERIENCE

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ABSTRACT

The project sought to increase the numbers and level of engagement of Worcester Art Museum visitors. It compared two gallery designs and surveyed current patrons and prospective college student patrons. Participant observation documented visitor engagement; a 500 person survey registered various degrees of awareness. Findings show that exhibits require in-depth descriptions, and staff needs technology training. Students are unaware of free admission and professors underutilize the museum. The salon style [remastered] gallery experienced greater visitor attention and time-in-gallery than traditional.

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EXECUTIVE SUMMARY

The Worcester Art Museum's ultimate goal is to become a cultural focus of New England. To do this they must broaden their clientele to include the local college students. Determining what types of exhibits and their level of interactivity is one of the main issues the museum faces. Exhibits must make core clientele feel comfortable while still engaging new visitors. Different methods of interactivity will also appeal to certain individuals. Surveying the clientele is critical for finding a solution to this issue.

The goal of our museum assessment project was to observe visitors in two galleries, survey the patrons, and analyze the results. The project had two main objectives. The first was to understand the rationale behind Renaissance gallery design. The second objective was to assess current and potential visitors of the current Renaissance galleries. With this information, we created a set of recommendations that adhered to the long-term mission and vision of the Worcester Art Museum. With these, the Worcester Art Museum can create a gallery with the potential to broaden and retain clientele.

CHAPTER 1: INTRODUCTION

Museums provide societies with opportunities to observe art, culture, and history. To do this, they have made exhibits that reach a wide audience. These collections are housed in dynamic spaces ranging from sanctuaries of learning to interactive environments. At the same time, these institutions struggle to find a balance of old and new. In fear of becoming outdated and in hopes of retaining younger audiences, many art museums are adopting interactive exhibits and taking in newer, unconventional styles of art. While many favor this movement, visitors still appreciate the traditional character of an art museum. Some want to observe pieces of art in quiet contemplation and others desire to engage with the art in new ways. Eager to please the widest audience possible and accommodate both ends of the spectrum, museums now want to develop engaging exhibits that provide both freedom and direction.

The Worcester Art Museum is attempting to adjust to the needs and wants of the public while providing educational opportunities for art professionals and enthusiasts. The museum strives to provide and maintain extensive artwork for the public ("Worcester Art Museum Annual Report 2012," 2012). This has been their mission since the 19th century when Stephen Salisbury III assisted in founding the Art Museum Corporation. The museum's dedication is apparent in their history and future goals ("NEW ART MUSEUM: Worcester's Gift from Stephen Salisbury and Other Citizens -- Contributions from Clubs and Societies," 1902).

Between 1932 and 1939, the museum joined an international consortium of distinguished museums, including the Musée du Louvre. This assisted the consortium in sponsoring expeditions to archaeological sites such as Antioch, Turkey ("Worcester Art Museum Information,"). The consortium placed the Worcester Art Museum on a global map. Since then, the museum has been undergoing major changes. In 2011, Matthias Waschek joined the staff as the new director. He planned to establish the museum as a cultural destination by 2020. To increase visitation, several steps and ideas were put in place. In 2012, the number of exhibits increased. In the summers of 2012 and 2013, free admission boosted attendance. This generated publicity and yielded returning guests in the winter ("Worcester Art Museum Annual Report 2012," 2012).

Waschek also established a new division within the museum, the Audience Engagement Division. Administrators believed interactive exhibits would increase audience interest and

attendance. Currently, the Worcester Art Museum is trying to reproduce successful interactive exhibits from similar museums. Touch carts, first introduced by the Virginia Museum of Fine Art, inform children on what can or cannot be touched within the museum. The station allows children to touch materials found in artwork and demonstrates the damaging effects. To promote interactivity, iPads and touch objectives were placed within updated galleries. Another change is the addition of seating. Cafe chairs are free to move around the renovated gallery for patron viewing or relaxing. To promote a relaxed atmosphere, books are also available in the galleries ("Worcester Art Museum Information, "). These additions have brought the museum into the 21st century.

CHAPTER 2: LITERATURE REVIEW

This chapter outlines in detail the agency, stakeholders, and key points which pertain to our study of the Worcester Art Museum exhibits. We explore the history of the museum and its business record. We investigate exhibit design and the integration of technology into exhibits. Finally, we present case studies of interactive art exhibits. This literature review provides a detailed understanding of background information needed in order to effectively analyze Worcester Art Museum's exhibits.

2.1: AGENCY DESCRIPTION

The Worcester Art Museum is located in Worcester, Massachusetts, and its goal is to become a major cultural destination in New England. The Worcester Art Museum houses over 35,000 selected works in their collection, spanning 5,000 years of culture and history. Since its opening in 1898, both the museum and collection have grown immensely. Only five percent of this massive collection is on permanent display. Currently, temporary exhibits are organized into three main categories: Contemporary, Photography and Drawings, and Asian and Prints. The museum offers educational programs for schoolchildren from the central Massachusetts area. In addition, a wide variety of studio classes and workshops are offered to visitors of all ages. The Library contains nearly 45,000 titles and operates in alliance with the College of the Holy Cross ("Worcester Art Museum Information,").

The Worcester Art Museum strives to engage with the local community. With the goal to increase its clientele, the museum is adjusting its focus towards its patrons. The specific vision is to attract over 200,000 patrons annually ("Worcester Art Museum Annual Report 2012," 2012). This has caused a push to engage visitors with rare and noted works. In 2013, director Matthias Waschek spearheaded several large projects that enhanced the museum. This included a photography exhibition entitled *Kennedy to Kent State* as well as the integration of the Higgins Armory Collection. This armory collection is second in the world, only to that of the Metropolitan Museum ("Worcester Art Museum 2013 Annual Report,").

In three years, the Worcester Art Museum has increased foot traffic by 70 percent within galleries. This is aided by the current process of transforming the museum into a family-friendly cultural location in Worcester. It is well on its way to becoming a prominent cultural destination

("Worcester Art Museum 2013 Annual Report, "). In order to further its reputation and visitation, the Worcester Art Museum takes great care to listen to its stakeholders.

2.2: SOURCES OF VISION

Stakeholders are vital in adhering to the mission of the Worcester Art Museum. Trustees are volunteers elected onto the Board of Trustees of the Museum to handle major affairs. These individuals help implement the museum's values into the community and lives of the people it serves ("Worcester Art Museum Annual Report 2012," 2012).

Museum patrons are instrumental to the vision of the Worcester Art Museum. The museum is geared towards attracting visitors and catering to their needs. The patron's preferences regarding content and presentation have a great importance in the museum's development.

Furthermore, there are individual donors that are involved with the museum. The Stephen Salisbury Society is one of the largest donor organizations of the Worcester Art Museum. The society was founded in 1992 to recognize the commitment of patrons who took a leadership role in supporting the museum. The society, named after its founder, Stephen Salisbury III, honors members of the Worcester community who contribute to the philanthropic tradition ("Worcester Art Museum 2013 Annual Report, "). This society continues the museum's practice of taking pride in its history.

2.3: HISTORY

The Worcester Art Museum's current goals originate from its beginnings as a small museum in Worcester, Massachusetts. For the opening in 1896, Stephen Salisbury III both organized the Art Museum Corporation and donated \$100,000 to the creation of the Worcester Art Museum ("NEW ART MUSEUM: Worcester's Gift from Stephen Salisbury and Other Citizens -- Contributions from Clubs and Societies," 1902). Citizens of Worcester made contributions of art collected from around the world ("NEW ART MUSEUM: Worcester's Gift from Stephen Salisbury and Other Citizens -- Contributions from Clubs and Societies," 1902). The Worcester Art Museum was established to serve the public. When posed with the opportunity to name the museum in honor of Stephen Salisbury, the notion was refused with the

“intention...to keep the museum a public affair, and to that end its name does not carry that of its chief benefactor” (“NEW ART MUSEUM: Worcester's Gift from Stephen Salisbury and Other Citizens -- Contributions from Clubs and Societies,” 1902). With that, the Worcester Art Museum was born.

The original mission of public service continues to this day. In 2013, Jon Seydl of the Cleveland Museum of Art was hired by the Worcester Art Museum as Director of Curatorial Affairs. He joined to help reach the “goal of increased accessibility and engagement” (Duckett, 2013). Worcester Art Museum Director, Matthias Waschek, described his goal as focusing on traditional strengths while discovering better ways to engage all audiences. One approach is to use innovation beyond traditional views. The newest exhibitions to the museum are part of a new remastered gallery, featuring 16th to 18th century Renaissance and Baroque masters. These remastered galleries, as defined by the Worcester Art Museum, display “works in a nontraditional way” and are billed as “an alternative approach to gallery design and interpretation” (Duckett, 2013).

2.4: VISION IN CONTEXT

According to a survey on visitor engagement by the National Endowment for the Arts, 33.4% of Americans visited an art exhibition or attended a performing arts event in 2012 (Cohen, 2013). This represents a 1.2 percent drop since 2008 (National Foundation on the Arts and the, 2013). This is partially due to a broader definition of the delivery mechanisms for the arts as well as a higher interest in more technology based leisure activities. Ten years ago, more than one in four Americans passed through the doors of a museum. Today, that figure has changed to nearly one in five (Cohen, 2013). In 2012, only 21 percent of Americans visited an art museum or gallery. Women, non-white and Hispanic groups, and graduate or professional degree holders visited art museums and galleries at approximately the same rates as in 2008. Museum-going rates declined for the young adults and middle aged adults. In contrast, adults 75 years or older experienced an increase rate of attendance (National Foundation on the Arts and the, 2013).

Robert Lynch, president of Americans for the Arts, a nonprofit organization in Washington, claims that shifting rates are reflected by an expanded definition of the arts and a wider variety of ways to participate. Randy Cohen, the vice president of research and policy at

Americans for the Arts claims that it is not art itself that people are turning from. People are turning away “from the traditional delivery mechanisms” (Cohen, 2013).

Despite these statistics, the Worcester Art Museum has increased attendance and endowments over the past five years. In 2013, nearly 75,000 patrons passed through the doors of the museum and almost half were paying customers. This is almost a 24,000 patron increase since 2011, when Matthias Waschek joined as the new director (“Worcester Art Museum Annual Report 2012,” 2012). His focuses are rooted in the principles of strategic focus and financial sustainability. This has sparked the development of the museum to raise it to its full potential.

2.5: EXHIBITS

Historically, art museum exhibits have had the reputation that art proficiency is needed to understand and appreciate the work featured in the galleries (Carliner, 2003). Museums house great masterpieces that can demand understanding and knowledge of the subject. Although highly specialized curators may design and assemble galleries, ultimately the deciding factor is public interest. Which artists or works will arouse curiosity and create revenue? Should art museums target small groups of potential donors or risk earnings for the sake of entertaining and educating the public? What type of experience should a patron have when viewing the gallery?

In Saul Carliner’s *Lessons Learned from Museum Exhibit Design*, exhibit design is broken into three main stages (2003). The “idea generator,” “exhibit designer, and “idea implementer,” leads each phase respectively (Carliner, 2003). The idea generator determines the main concepts or themes and chooses the content of the exhibit. Then, the exhibit designer takes the concept to prepare physical designs for the new gallery, creating display cases and deciding wall and floor coverings for the overall ambiance. Lastly, the idea implementer brings together everything to create the exhibit. The implementer collects any missing pieces for the gallery, ensures conservation of displayed pieces, and oversees all parts of the assembly (Carliner, 2003).

One aspect of exhibit design is audience targeting. In attempts to broaden constituencies, many museums have adopted “behind the scenes” diversity in order to enrich exhibitions (Carliner, 2003). By having many different types of people working on exhibit development, there is a depth and appeal that attracts more viewers. Research and studies during exhibition development help the museum target specific clientele.

Exhibit design should refrain from making an exhibit a “book on a wall” (Carliner, 2003); interaction should not be limited to reading short summaries placed to the side of the featured work. Exhibits should immerse the viewer in the artwork, making them feel as if they are a part of the piece and not outside of it. The viewer should be able to obtain a complete understand from various levels and mediums of information. One way to effectively convey information to the patron is through the use of technology.

It is vital to consider the purpose of the gallery or exhibit when developing the design. According to McKenna-Cress and Kamien in *Creating Exhibitions*, design must be tailored to clientele by emphasizing education, communication, and visitor participation (133). Galleries should not be designed to make the patron feel intimidated or confused. Rather, emphasis should be placed on the exhibit “promoting inspiration and confidence” in the subject matter (133).

While it is important to guide the visitor through the experience, “an organizational structure too obviously rigid or monotonous can quickly become boring” (133). *Creating Exhibitions* suggests that a memorable exhibit should include “real stuff” such as objects or collections, while promoting “authentic experiences...[and] social spaces” (135). Material presented in the museum should be able to speak for itself and have an engaging story. The experience should provide the visitor with the opportunity to interact or become immersed in the time period of the pieces on display. Lastly, the authors emphasize the importance of creating social spaces that promote opportunities to discuss museum content (139).

2.6: TECHNOLOGY

There are many types of informational opportunities that exhibits can provide. The uses of sound, video, informative summaries, or interactive technology are all options for creating an educational exhibit. Art museums have been implementing technology to cultivate audiences. Museums, as visitor-driven environments, are the perfect location to incorporate technology to educate visitors on many levels. Patrons have different learning styles; some prefer a limited approach while others need an engaging, interactive exhibit. Other patrons prefer to observe in a traditional setting with minimal disruption. This forces museum curators to design cost effective exhibits with optional interactivity. Contemporary art and science museum hybrids provide the most interactive experience. Artists create digital art with a focus on interactivity. In one extreme

example, a museum might display the moving artwork on large screens, similar to a movie (Costello et. al, 2005). Despite these successful exhibits, many art museums do not display this kind of artwork for fear of deterring their current clientele.

Fine art museums generally implement less dramatic technologies. One popular approach is to offer audio tours. The museum rents out headphones and the visitor may listen to a prerecorded tour, stopping at larger exhibits. Audio tours can be downloaded onto the patrons' phone or iPod for listening ("Museums Exhibit Tech Appeal," 2008). Personal digital assistants, such as iPads, can provide supplemental information on each exhibit. The visitor carries the digital assistant through the museum, giving them the opportunity to learn more about exhibits that interest them. Supplemental information can include additional reading, facts, and pictures (Bohnert & Zukerman, 2014). Another way to integrate technology is to use ubiquitous computing as an exhibit component. This alternative allows technology to be embedded in the exhibit without drawing attention from the artwork.

The Worcester Art Museum has begun to develop technological opportunities in their galleries. Some of the galleries have iPads placed close to a painting or part of an exhibit. The technology provides a brief paragraph for the individual pieces of art or an interactive learning activity. This can transform a museum from a static environment to one of subtle engagement for curious visitors. The director of the National Gallery stated "there is no substitute for interaction with original works of art" (Harrison, 2011). Implementation of these technologies has "[attracted] more of a younger generation to the gallery to see the art" (Harrison, 2011). Other museums have found that such technology usually interests a younger audience. The level of effectiveness among the current clientele of the Worcester Art Museum still needs to be evaluated.

2.7: VISITOR ASSESSMENT

Museums implement different strategies to gather feedback about exhibits, specifically interactive ones. A common method is an observational study. This practice provides specific and unbiased information for the museum about specific exhibits. The museum can hire a person, known as a tracker, to sit in the gallery to evaluate patrons' participation. The tracker watches the museum visitors and records their experience. The tracker writes which exhibits the visitor

pauses at, length of stop, and usage of interactive features. Exhibits with longer stops reveal which pieces were more engaging. Times are recorded in a rubric or computer program (Bohnert & Zukerman, 2014). Observation studies provide an unbiased and inconspicuous look into visitor behavior and reactions. Focus groups, surveys, and interviews are other alternatives that allow the patrons to give direct feedback. The Methodology portion of our report further explores ways of documenting the experience of various clientele.

2.8: CASE STUDIES

In this section, we explore two case studies. Each case study focuses on a different approach to interactive exhibit design. The first explores the impact of interactivity on an exhibit at the Jordan Schnitzer Museum of Art in Oregon. The second case study takes place at the Cleveland Art Museum in their renovated gallery, Gallery One, where the museum implemented various opportunities for interactive learning.

INTERACTIVE TECHNOLOGY IN ART MUSEUM EXHIBITIONS

The use of focus groups as a strategy to receive feedback on an interactive exhibit is a common practice in museum evaluation. The Jordan Schnitzer Museum of Art in Oregon introduced an exhibit featuring sketches of the 18th century Roman skyline by artist Giuseppe Vasi. To boost learning and interest, kiosks with iPads were placed in the center of the gallery while the sketches hung on the walls. A graphic imaging program on the iPads allowed visitors to compare Vasi's paintings to Rome's skyline. Digital photographs of the modern cityscape could also be compared with Vasi's work. The kiosks gave the patrons the option to be interactive with the art. The iPads featured an easily navigable program with large icons and simple instructions created to accommodate vision limitations and first-time users. A visitor with no iPad experience was still able to interact with the exhibit (Harrison, 2011).

The museum added the technology to enhance the original artwork, not replace it. The purpose of the interactive addition was to appeal to different audiences while encouraging learning in a visitor-driven environment. After implementing the technology, the museum conducted a focus group to receive direct feedback from first-time visitors. The group participants ranged in age, race, and background. Certain professionals, such as grade school

teachers, were invited to the group along with community members, like high school students and museum volunteers. Most focus group members used the iPads while visiting the exhibit. Of the users, the majority agreed that they could more easily relate the art to their own lives by using the iPad. The information was more accessible and informative using the kiosk than having a written summary next to sketches. The iPads provided additional depth while observing the paintings. Overall, patrons had favorable responses to the iPads within the exhibit. The users who chose not to use the technology were not interrupted by it. The iPad kiosks allow inclined visitors to interactively engage with the art without disturbing uninterested visitors (Harrison, 2011).

TRANSFORMING THE ART MUSEUM EXPERIENCE: GALLERY ONE

A recent mission of many art museums is to integrate interactive technology with art to engage visitors. Gallery One at the Cleveland Museum of Art (CMA) opened a 13,000-square-foot gallery in December 2012, blending together art and technology in a dynamic environment (Alexander, Barton, & Goeser). Designed for all ages, Gallery One is organized into thematic groupings divided by culture, media and history. Large touch screens placed around the gallery, set back from the wall, allow for interactive opportunities to explore the artwork more closely. Each interface includes a series of games and activities that engage visitors, specifically families and children to engage with the artwork and spark curiosity (Alexander et al.). The placement of the screens, about 14 feet from the displayed work, offers patrons the opportunity to view the artwork in a more traditional gallery setting without interfering with their experience. This allows for the visitors to get as much information as desired before moving onto the next piece.

To enhance their experience, visitors can also utilize ArtLens, an iPad app developed by the CMA. iPads are available for rent for \$5 or the app can be downloaded for free to the visitor's personal device. ArtLens targets three types of visitor behaviors. The first feature is titled "Near You Now," allowing visitors to browse through digital interpretations of work within their proximity based on their location within the museum. To allow the visitor to choose the depth of their learning experience, curators pair content with audio or video clips. A second feature is "Tours," which enables the visitor to choose a length of time and walk through the galleries with an audio tour by of the CMA's director. Other types of tours saved in the app's

database are also available to the user. Lastly, “Scan” lets the visitor scan a two-dimensional object, triggering text and video to pop up on the screen, enhancing the patron’s interactive experience (Alexander et al.).

These opportunities personalize the visitors’ experience, customize their learning opportunities, and allow them to adjust their experience based on their needs. The mission of Gallery One was to “create a nexus of interpretation, learning, and audience development” (Alexander et al.). These interactive technological advancements for the museum exhibit built audiences for the CMA in exciting and innovative ways, making artwork understandable to all sectors in a visitor-driven experience.

2.9: SUMMARY

In sum, we learned three key points in our literature review. To maintain the momentum of the Worcester Art Museum’s growth, the museum is exploring new ways of designing their exhibits. Their focus is to engage a wider audience while accommodating their current clientele. By updating exhibits and experimenting with technology, the Worcester Art Museum wants to evaluate the success and advantages of the changes. To complete this evaluation, the museum needs exhibit-specific data to measure the effectiveness of the remastered exhibits in comparison to the traditional galleries.

CHAPTER 3: METHODOLOGY

The goal of our project at the Worcester Art Museum was to improve the quality of the Worcester Art Museum galleries by assessing and analyzing the educational value and appeal of their two Renaissance exhibits using patron and community-based data. This section outlines our data collection process in order to understand the needs of the stakeholders and how we developed our recommendations. From this goal we developed two main objectives.

1. Analyze Renaissance gallery design motives
2. Assess current and potential clientele

In addition to our objectives, the methodology includes our data management and estimated timeline for the project.

3.1: UNDERSTAND RENAISSANCE GALLERY DESIGN MOTIVE

In order to effectively analyze the Renaissance galleries, it was crucial to know the motives behind the design. To understand the rationale of the changes made in the [remastered] versus the traditional Renaissance exhibits in the Worcester Art Museum, we examined gallery design in a number of ways. Our first step was to conduct a site assessment followed by field research.

SITE ASSESSMENT

To identify the changes to the [remastered] gallery we conducted a site assessment that compared the two galleries. Both exhibits featured Renaissance paintings with similar subject matter and the occasional object or sculpture.

In the three traditional gallery rooms, walls were painted with light pink. The neutral color did not complement or distract from the artwork. Each painting was equally spaced along the wall at eye level and lay flat against the wall in a linear setup. Lighting illuminated the room equally and did not have direct focus on any painting in particular. This lighting scheme interfered with observation by leaving distracting shadows on the art, especially on sculptures and three-dimensional pieces. Two of the three rooms had stationary benches placed back-to-

back in the center of the room. The benches were about seven feet away from the closest paintings and over fifteen feet from the farthest. Smaller artwork could not be easily viewed from the benches and the details on larger paintings were not clear. Next to each piece in the traditional gallery, a two-paragraph summary was supplied. The summary covered factual information including the artist's name, year of completion, and an interpretive statement to explain the piece.



Figure 1: Panorama of the Traditional Gallery

The [remastered] exhibit piloted many changes that promoted interactivity for museum visitors. One noticeable difference was the paint color on the gallery walls. In the [remastered] gallery, bold wall colors brought out depth in the paintings. Two rooms of the gallery were painted a deep jade. The third room was a dark maroon. This complemented and highlighted the subject matter. Lighting in the [remastered] gallery was angled to feature individual paintings. The [remastered] gallery featured paintings tilted away from the wall to replicate hanging techniques from the 1700 and 1800's. This allowed visitors to view paintings higher up the wall with a perspective the same as if the artwork was at eye level. Tilting was necessary since the paintings were arranged in a salon style as opposed to linear. This style is more scattered with paintings arranged in groups on the wall. Paintings were placed above the door or higher on the wall than other artwork. This more crowded, scattered arrangement was designed to create a more involved viewing experience and immerse the patrons in the art.

To encourage prolonged and more in-depth viewing, the curators placed moveable cafe chairs within the new gallery. These allowed visitors to take a seat in front of a painting of interest. The [remastered] gallery did not have summaries next to the art. The curators wanted to

encourage visitors to create their own interpretations from the pieces while in the gallery. Factual information about the paintings could be found in the room's gallery guide, which simply indicated the title and year created. Two iPads, located the middle room of the gallery, held more in depth information. Book carts were also placed alongside the iPads. The carts contained books of varying levels of reading, ranging from art history novels to children's books to binders about meditation and writing within galleries. After conducting an assessment of the two galleries and their differences, we had more knowledge of what to look for while conducting field research.



Figure 2: Panorama of the [remastered] Gallery

Our methodology was guided by these key differences in the exhibit design. We recorded how these changes affected visitor experience and behavior on the observation maps, which is later discussed in the Data Analysis section.

FIELD RESEARCH

To set the stage in understanding contemporary approaches to curation, we visited the Museum of Fine Arts (MFA) and Harvard Arts Museum in Boston. Each of these museums is a model to the Worcester Art Museum's mission to draw in larger and more diverse crowds. At the Museum of Fine Arts and Harvard Arts Museum, we studied and observed visitors' responses and interactions in the galleries. We also noted how pieces, both paintings and objects, were exhibited. This allowed us to identify differences in the Worcester Art Museum while comparing other techniques similar museums used in their galleries.

We then examined the Worcester Art Museum Renaissance galleries. Before meeting with museum officials, we visited the galleries and we interacted with the different medias

available. Following this, we discussed gallery practices with Jon Seydl, the Director of Curatorial Affairs, and established weekly meetings. We also contacted Marcia Lagerwey several times to develop effective survey questions. When possible, we attended board and staff meetings related to gallery design and exhibitions. This informed us of the current attitude and development of the museum and its galleries.

INTERVIEWS

We contacted two Renaissance galleries curators, Marietta Cambareri from MFA Boston and Stepghan Wolohojian from the Fogg. Due to busy schedules, the interviews were conducted online via email. Interview questions can be found in Appendix A. We also interviewed Worcester Art Museum curators, specialists and administrators. This allowed us to effectively compare the Worcester Art Museum's design approach to MFA Boston and Harvard Art Museum. Interviews were conducted with each curator of the Renaissance exhibits and sample questions can be found in Appendix A.

3.2: ASSESS CURRENT AND POTENTIAL CLIENTELE

The assessment of current and potential clientele was pivotal in understanding museum success. Retaining current clientele as well as attracting new demographics has the potential to influence gallery design.

CURRENT CLIENTELE

The retention of current clientele is integral to the success of a museum. Once the patrons exited the [remastered] gallery, they were surveyed. The surveys were given digitally on iPads. Questions used can be found in Appendix B.

To monitor the most popular areas of each exhibit and to evaluate the use of the iPads and other informative media, we created a map that located popular areas of the galleries. A map of each gallery was created in Microsoft Publisher. Each 2D representation included paintings, sculptures, and seating. The [remastered] map had additional features unique to the gallery. The iPads, book carts, and gallery guides were the added interactive elements. We did not focus on which specific paintings the patrons tended to favor within the exhibit. The galleries were

viewed from an analytical viewpoint without focusing on the art. We focused on the differences between the two galleries rather than art within both. The observer sat on a bench or chair in the middle of the gallery. As a visitor entered the gallery, a line was drawn on the map to represent the path traveled through the gallery. Two final maps were created from the gallery representation maps. The observational maps were created by compiling all of the 2D maps in Microsoft PowerPoint. Each patron was drawn on with an opacity of 1%. As more patron paths were drawn on, the overlapping locations grew darker. 100 paths were recorded in each gallery. The darkest spots were determined to be the most popular paths or stopping points.

The final result was two maps: one for the Renaissance gallery and another for the [remastered] gallery. These density maps revealed popular viewing locations. The data collecting process involving the maps is explained in the Data Analysis section.

POTENTIAL CLIENTELE

The Worcester Art Museum would like to increase the attendance of college students. It is important to determine the percentage of that demographic that has not been to the museum and what would motivate them to go. By surveying major colleges in the area, we established a general understanding of what this demographic is looking for in an art museum while also informing students that the Worcester Art Museum is free to Worcester students. The survey also revealed whether or not professors send their students to the Worcester Art Museum for academic purposes. We conducted surveys in each college's campus center. In order to attract the most college students, we offered candy as an incentive. This allowed us to survey the largest number of people possible in a comfortable environment. Sample questions can be found in Appendix B.

Our team visited the five colleges that support free admission at the Worcester Art Museum for college students. These included students at Assumption, Clark, Holy Cross, Worcester Polytechnic Institute, and Worcester State University. At each college we surveyed approximately 100 students.

DATA ANALYSIS

In order to effectively analyze the data collected from surveys and interviews of current and potential stakeholders, various maps were created. First, we created a 2D map of the each of

the two Renaissance galleries. These maps were used to track the movements of patrons throughout the gallery. Physical copies of the 2D map were printed out and five visitors were recorded on each map. The visitors were recorded using colored pencils; each color corresponding to a different visitor. This 2D map was rendered using Microsoft Publisher and can be viewed in Appendix C. Five visitors were allotted per map. More than five caused the maps to become too cluttered and difficult to read. In order to track the patron, the 2D map was marked with an “x” wherever the visitor stopped longer than 10 seconds and the map was also marked with an arrow describing the path the visitor took through the gallery. This created two separate density maps, one with where the visitors most commonly stopped and one with the most common path through the gallery. Once completing the study, we compiled all of the 2D maps into two observation maps. The compiled data allowed us to locate places in the gallery that were not receiving much attention by patrons.

3.3: GALLERY DESIGN RECOMMENDATION

Based on our results of the survey and observation study, we set out to create a set of recommendations for updating the Renaissance gallery in the Worcester Art Museum. Data collected from surveys and interviews was visually represented through bar graphs and frequency charts. Maps generated during the observation study were compiled into two illustrations to display the concentrated viewing locations of each gallery. These maps were used to determine the most popular areas and revealed which elements in the Renaissance galleries were used most frequently. Our focus was on the areas with iPads, book carts, and seating. This established the prime locations to place interactive features for maximum usage. Material was then presented as a comparison of the museum’s two Renaissance galleries.

The ideas proposed were created with adherence to the long-term vision of the Worcester Art Museum. Recommendations were made to attract new patrons while maintaining the current clientele. To assure that the proposed changes are appropriate, we plan to meet with the museum administrator before giving final recommendations. The finished product was a set of recommendations specific to the museum's galleries and mission statement.

3.4: DATA MANAGEMENT

All the information from interviews and surveys collected during the project was gathered with participant consent. All survey and interview data remained confidential and was not be distributed in any manner. All collected information was stored on a password-protected computer with raw data being destroyed upon project completion.

3.5: ESTIMATED TIMELINE

The bulleted tasks need to be completed to accomplish the below objectives. We used this chart to track progress throughout our time at the Worcester Art Museum (see Figure 3).

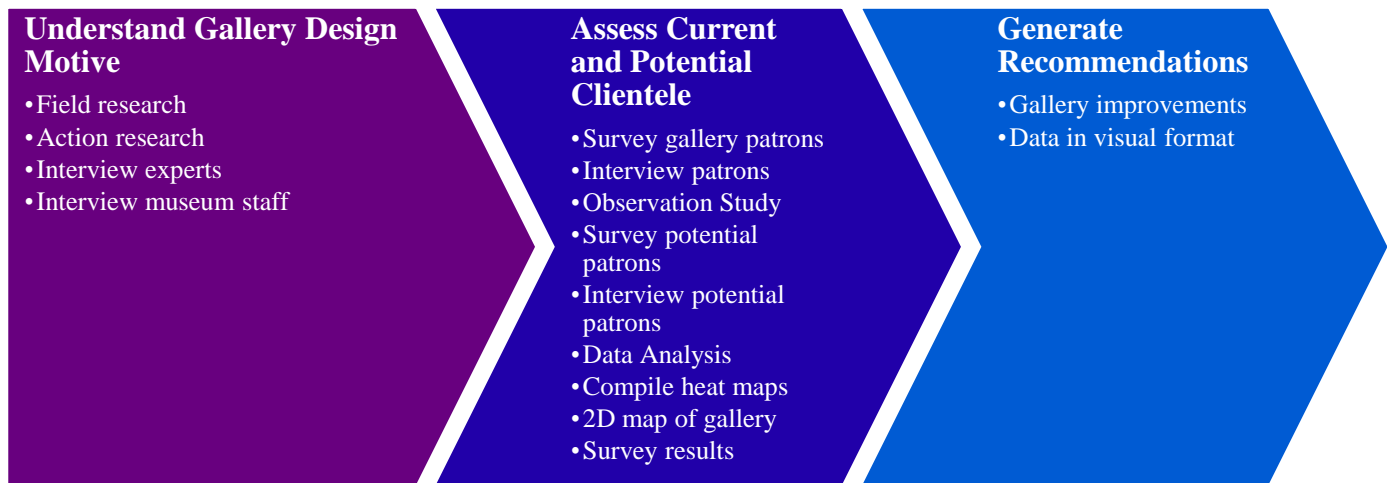


Figure 3: Objectives overview

The Gantt chart below illustrates the timeline for the project objectives with the corresponding deadlines. The graphic below visually represents the four objectives outlined in the methodology (see Figure 4).

Worcester Art Museum: Museum Experience Assessment

Proposed Timeline	Week 1 1/15-1/21	Week 2 1/22-1/27	Week 3 1/28-2/2	Week 4 2/3-2/9	Week 5 2/10-2/16	Week 6 2/17-2/23	Week 7 2/24-3/6
Field Research							
Expert Interviews							
Observation Study							
Survey Gallery Patrons							
Survey Potential Patrons							
Data Analysis							
Generate Recommendations							

Figure 4: Gantt chart

CHAPTER 4: FINDINGS

4.1: FIELD RESERCH

The field research at the Museum of Fine Arts (MFA) and at the Harvard Art Museum in Boston allowed us to view other Renaissance galleries. Because both are popular museums, it seemed the Worcester Art Museum might want to know of their techniques. At the Museum of Fine Arts, we noticed that the design encouraged communication. There was an open floor plan that promoted free, relaxed movement. In the Renaissance gallery, artwork descriptions were placed on information stands on the floor instead of the wall. This allowed visitors to view artwork on an unobstructed surface, while supplying the option to easily find the information about the artwork if desired. Many patrons also utilized the audio tours; we observed visitors with the headsets and noticed the numbers next to paintings and objects, which indicated the audio offering. There were not many interactive features in the MFA and there were few seating options.

The Harvard Art Museum was similar to the Worcester Art Museum in gallery design. Labels were placed next to the artwork on the wall and central seating was found in each room. All of the Harvard Art Museum galleries were uniform in design and presentation of the artwork. There was an interesting interactive element on their top floor where visitors could explore the Conservation Center where pieces were curated. However, many visitors did not venture to this top exhibition.

4.2: OBSERVATIONAL STUDY ANALYSIS

The observation study examined trends of visitors as they travel through the [remastered] and traditional Renaissance galleries at the Worcester Art Museum. Travel patterns show where and long patrons would stand to view the art. Final maps, which compile individual data from the observation study, can be viewed in Appendix D. With this information, the staff can determine various ways to capitalize on the popular paths in new or redesigned galleries. These maps are evidence that the [remastered] exhibit has affected the traditional way people view the art.

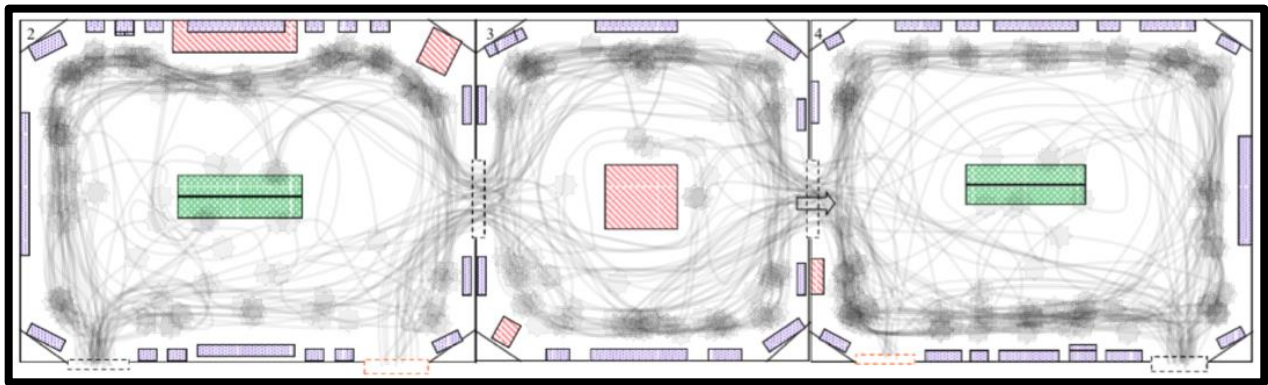


Figure 5: Traditional Gallery Observation Study

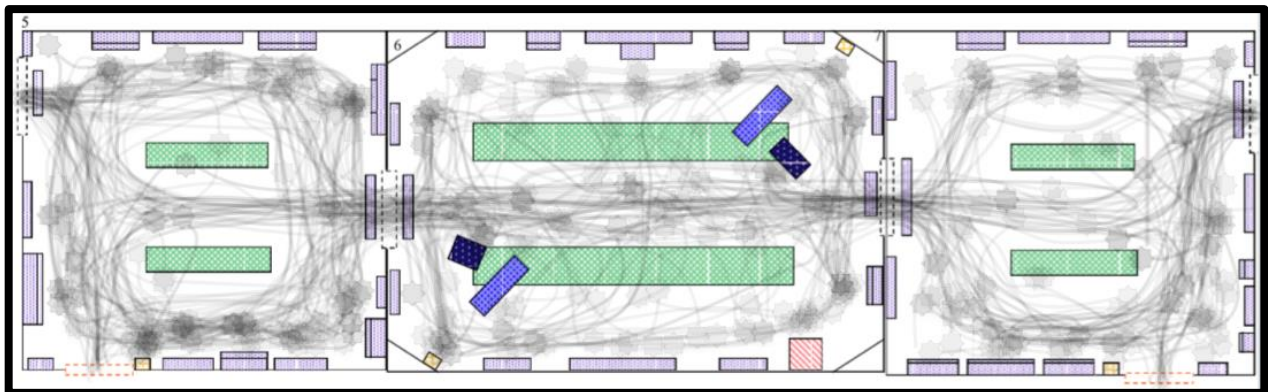


Figure 6: [remastered] Gallery Observation Study

QUALITATIVE INFORMATION ABOUT TRADITIONAL GALLERY

Through the observation study of the traditional gallery, we determined a typical visitor path. Most visitors began in the Raphael exhibit before entering the first room of the traditional gallery. At the end of the gallery, visitors usually entered the [remastered] gallery but some exited to the main atrium. Most visitors followed a circular path, remaining beside the walls of the room. Common viewing spots, where a patron stopped for ten seconds or more, were found to be either directly in front of or to the right side of the artwork. Painting descriptions, set to the right side, caused the viewer to stand there to read. Most visitors did not observe every painting. A demonstration of this path can be viewed in Appendix E.

Another common path in the traditional gallery was to move along one wall throughout the gallery while neglecting the opposite side. For example, the visitor would enter from a doorway on the right wall of the first room of the gallery. They would walk along the right wall,

observing the paintings only on the wall adjacent to them. When entering the second room of the gallery, the visitor continued viewing the right wall. This would continue to the third and final room where the patron would exit.

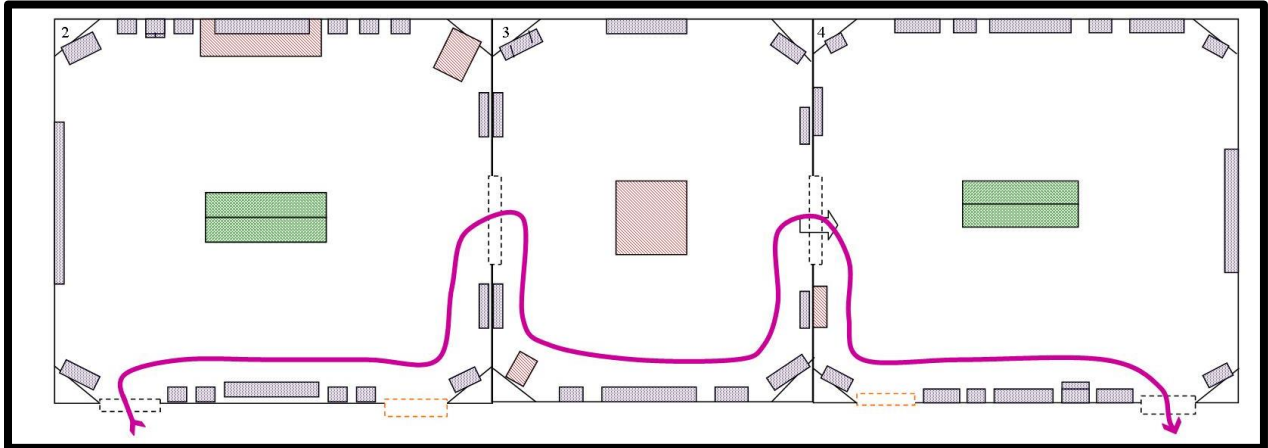


Figure 7: Right handed path demonstration in Traditional gallery

If every painting on the right wall was viewed, only 22 paintings of the 54 on display in the gallery were observed. In this case, nearly 60% of the exhibit does not receive more than a glance. Three-dimensional art, such as sculpture and furniture, attracted visitors if placed on the side of the room but was ignored if placed in the middle, such as in the middle room of the traditional gallery.

Typically, seating placed in central locations in the traditional gallery was ignored, and only a handful of visitors took advantage of it. Furthermore, when it was used, seating largely appeared to be for rest instead of viewing artwork. Very rarely did we observe a visitor sit down and continue viewing the artwork.

OBSERVATIONAL INFORMATION ABOUT TRADITIONAL GALLERY

While conducting the observation study, not all findings could be quantified. After spending a couple hours in the gallery each day, we noticed trends in visitor behavior. Patrons seemed to focus on painting summaries more than the artwork. Most time spent in the gallery was spent reading, followed by brief observation of the work. Larger paintings attracted more attention than smaller ones. The bench seating did not provide a close enough viewing experience, and instead was used for resting. Visitors often used benches in room 2 of the

traditional gallery once exiting the Raphael exhibit. Typically, patrons viewed paintings by standing about two feet away from the wall in this gallery.

Visitors traveling through the gallery were generally quiet. They did not interact with the guards or ask questions related to the artwork. If they did speak, visitors only interacted with companions in hushed voices, as if in a library. Patrons took close up photographs of the paintings, which were for documenting artistic technique. Overall, the traditional gallery's quiet atmosphere and minimal interaction provided a typical museum experience, similar to our experiences at the Harvard Art Museum and the Museum of Fine Arts.

QUALITATIVE INFORMATION ABOUT [REMASTERED] GALLERY

In the [remastered] gallery, there were a number of findings we determined from path trends. Most visitors entered the gallery into room 5 through either the traditional gallery entrance or the balcony entrance. Of the three [remastered] rooms, the highest frequency of stops occurred in room 5. Patrons most often observed the two main walls, which held paintings arranged in a salon style. Many photos, presumably for social medias including Instagram, Facebook and Snapchat, were taken in this room with paintings on either of these walls as the main subject.

From the first [remastered] room, patrons typically moved into the middle room of the gallery. Upon entering, many would stop at the gallery guides, iPad, or the first painting on the immediate left. Movement through the middle room, room 6, had fewer observation locations. Most patrons wandered around in no apparent pattern. Before exiting this room, many visitors would observe the sculpture located near the doorway. The gallery's second iPad, placed opposite the sculpture, was often ignored. Before the patrons entered into the final [remastered] room, they would stop to observe the painting over the doorway. When entering room 7, visitors would bear right toward a cluster of paintings, and then exit to the rest of the gallery or to the balcony.

Of the three rooms, room 5 had the most frequent locations for viewing, and most of the time spent in the [remastered] gallery was in this room. In the middle room, the back leftmost wall was either ignored or glanced at; most patrons gravitated towards the iPad or the sculpture on the opposite side of the room. Due to the size of the middle room, patrons often moved

organically through the gallery, making frequent and disorganized stops at various paintings. This organic path was important in the viewing experience because it individualized the visitor's involvement in the gallery. In a typical path, over half of the paintings within these three rooms were ignored. In addition, nearly three quarters of the paintings in rooms 6 and 7 were neglected.

The interactive elements in the [remastered] gallery caught the attention of many patrons. During two of the five days we spent in the museum, the iPads in the gallery were experiencing technical issues. Taking that into consideration, 22% of patrons observed used the iPads. In our analysis, we accounted for the number of patrons that approached an iPad, regardless of its performance. Other informational opportunities in the [remastered] exhibit included the Gallery Guides and book carts. 39% of patrons used the gallery guides while only 7% took advantage of the two book carts.

Seating was taken advantage of throughout the [remastered] gallery. In the middle room, moveable chairs were usually arranged linearly, facing the walls of interest in two parallel lines. Chairs were rarely moved around by visitors, but guards or curators would occasionally adjust chair orientation throughout the gallery. Some patrons seemed uncomfortable with moving the chairs, but the seating style was more popular than the benches in rooms 5 and 7.

OBSERVATIONAL INFORMATION ABOUT [REMASTERED] GALLERY

The [remastered] exhibit inspired a different viewing experience and atmosphere. We recorded observations while collecting data on the observation maps. Patrons appeared more relaxed and focused on the artwork, which fostered conversation. Visitors discussed paintings with others, including both companions and strangers. Patrons also questioned and spoke with museum guards regarding the gallery and artwork. The lack of written summaries forced patrons to observe the artwork more closely, allowing them to form their own observations and connections, as we learned from our survey data and conversation with the patrons.

Many visitors utilized the gallery guides but expressed the need for additional information. Patrons would carry the guide while wandering the room but seemed confused by the organization of the guide. Cafe chairs were never moved by patrons and book carts remained mostly untouched. In the middle room of the [remastered] gallery, room 6, most visitors viewed the artwork from the afar. Cafe chairs were arranged to form an aisle through the center of the

gallery. This sometimes herded patrons down the middle, deterring them from wandering up to the art for a closer perspective. When chairs were arranged more randomly, movement throughout the gallery was more organic and less structured.

Compared to the traditional gallery observation map, the [remastered] gallery map displayed a more chaotic path as visitors moved from painting to painting. Many patrons would view a piece on one side of the room, and then turn to view on the alternate side of the gallery. This serpentine pattern would continue throughout the entire exhibit until exiting. The iPads and gallery guides encouraged this pattern as visitors would disrupt their typical flow to take a guide or interact with the technology.

The salon style of the mounted paintings promoted longer observation. The arrangement also encouraged deeper thought regarding the curation of the gallery. Many visitors used social media to photograph the paintings and positioning, suggesting a more relaxed and social atmosphere.

4.3: SURVEY STUDY ANALYSIS

In order to attract different patrons, it is important to understand needs and interests of the audience. For this reason, we surveyed patrons of the Worcester Art Museum. This survey helped us understand the different gallery experiences as well as to what level the patrons enjoyed both of these experiences. In addition, we surveyed potential visitors at the college level at the five schools in which students get free access to the museum with a school ID. These colleges included Assumption College, Clark University, College of the Holy Cross, Worcester State University, and Worcester Polytechnic Institute. This survey helped us determine interests for students and factors that have prevented students from visiting. Through surveying, we assisted the Worcester Art Museum in advertising free admission for these five colleges.

GALLERY SURVEY ANALYSIS

After patrons visited both the traditional and [remastered] Renaissance galleries, we surveyed them on their experience. The survey focused mainly on the interactive elements of the [remastered] exhibit. We surveyed for approximately a week and got 61 responses which can be viewed in Appendix F. Of those responses, 38 patrons were above the age of 45, showing that

the museum does typically have an older audience. The majority of respondents were not museum members (91.8%). Despite not being museum members, 61% claimed that it was not their first visit to the museum and 85% responded that their visit was for recreational purposes. None of the visitors ranked their gallery experience below a 3 (average), with the majority selecting a gallery experience of 4 (above average). This revealed that all patrons enjoyed their overall experience.

Regarding the interactivity of the gallery, we received many differing opinions. Almost all visitors desired an easier way to access information about the paintings. During two of the five days we surveyed and observed at the museum, the iPads were not functioning and visitors had no way of finding detailed information on the paintings. Many desired more information in the gallery guides. Other suggestions included an audio tour, a smartphone application, or a simpler interface on the iPad. 80% of the patrons preferred the traditional method, where descriptions are placed on the wall. Other visitors were conflicted because they did enjoy viewing the art without distraction from a description but also wanted easy access to more information.

During their gallery experience, of the 61 surveyed, 42 patrons did not use the book cart or the iPad. Of the 15 patrons who used the iPad, 73% found it easy to use. The majority of visitors who used the iPad were able to find the painting description they were looking for. The moveable chairs were often neglected. This is reflected in the survey results. Of those surveyed, 32 patrons enjoyed stationary benches and 11 enjoyed the moveable chairs.

With the gallery survey results, the staff can help tailor the experience in the specific exhibits and galleries to the wants and needs of the clientele. While many visitors enjoyed experiencing the gallery without distraction from a label description, they would also prefer to easily access more information should they want it. The surveys allowed for a more personal view on the visitor's experience in comparison to the observation maps. Together, the survey and observation study maps give a well-informed view, through both qualitative and quantitative methods, of the visitor's experience and opinion of the Renaissance galleries.

COLLEGE SURVEY ANALYSIS

We piloted our college survey at Worcester Polytechnic Institute. As our trial study, we were able to easily test the Survey Monkey database with definite access to wireless internet in a comfortable environment. Our data collection at WPI provided us the largest number of complete surveys, a total of 135. The Institute's overall interest in art was the second highest in comparison to the five colleges (3.01). This is an unexpected finding, since the Institute caters to the science and engineering population. Fifty-six percent of the surveyed population had received at least a high school level art education. When asked about their attendance to the Worcester Art Museum, 60% of the students stated that they had been to the museum. Thirty-three percent of students had gone to the museum for classes; a much lower percentage in comparison to the other colleges. In addition, 40% of students attended the museum due to personal interest and 54% went because it was free. Three quarters of the surveyed students were aware that the museum was free. Of those who have not attended, almost 70% have interest in visiting but have not gone due to lack of time.

Worcester State University was the second institution that was surveyed. The interest in art was slightly below average (2.97). Most students had a high school art education. Sixty percent of participants had attended the museum. Of those who visited, almost 60% of students had gone to the museum for classes or a school trip. For the 40% that had not visited, participants had varying reasons for not attending. These included, in order of frequency, being interested but having no time, having no interest, or not being aware the museum existed. Worcester State students were also the least likely to know about free admission with a school ID.

Assumption College was the third institution that was surveyed. Although this college had the lowest overall interest in art with a 2.79 average, Assumption College had the highest percentage of students with a college level art education. Two thirds of the students surveyed had visited the Worcester Art Museum. Of the students who had visited, 82% had gone for academic purposes. For those who had not been to the museum, most did not have any interest in visiting. Sixty percent of Assumption students surveyed did know that visiting is free with a school ID.

College of the Holy Cross was the fourth college we visited. Students had not only the second highest interest in art, but also the highest number of students pursuing an art related degree. Despite high interests, only 52% of the participants surveyed had been to the museum.

Those who had visited went for either classes or interest in art. Following a similar trend of the previous colleges, students claim having an interest in visiting the Worcester Art Museum but lack the time to. About 57% of students had no knowledge that the museum was free.

Clark University was the final college we surveyed for our study. University students had the highest average interest in art (3.52). Although interest in art was high, only 35% of the participants had previously attended the museum. Of the participants that have attended, most have attended due to their high interest in art. Of the 65% that have not attended, 56% have a high interest in visiting but do not have the time. This corresponds very closely with the WPI demographic. The most remarkable result at Clark was that over 60% of students surveyed did not know the museum was free.

All college survey results can be viewed in Appendix G. Overall, there is a gap of knowledge regarding the free museum admittance. In addition, few professors have taken advantage of this resource for their classes. Although many students claim to have a high interest in art, many are less likely to go due to lack of time to or cost of admission. Increasing the awareness of free admission should attract more students. Convincing professors to give lectures or assignments in relation to the museum will bring in more students who are interested in attending but do not have the time.

Proximity to the Worcester Art Museum is also an interesting factor in attendance. For WPI students, the museum is a short five-minute walk from campus. For Clark or Holy Cross students, the museum is at least a half hour bus ride away. Geographical location in the city affects students' interest levels and general knowledge about the museum, as seen in our data analysis.

Each of these five colleges has its own culture in the greater Worcester area. Establishing the Worcester Art Museum as a part of their cultural and academic collegiate experience is an important factor in the museum's marketing attempts for college students. Each institution provides the museum with information for directing their focus to increase the collegiate demographic.

CHAPTER 5: RECOMMENDATIONS

The analysis of the data from the museum galleries and college surveying experiences leads us to a series of recommendations for the Worcester Art Museum. Our first set of recommendations is short term solutions for the museum. These will require less time and resources for the Worcester Art Museum to implement. Using our analysis of the gallery surveys and observation study, we proposed changes for the galleries themselves.

The [remastered] gallery, designed by Matthias Waschek, was a successful pilot of an interactive gallery experience that promoted reactions from the visitors. Some patrons desired a balance of the traditional gallery elements with the [remastered]. One traditional element that many visitors wanted was the option of more information about the paintings. To refrain from interfering with artwork interpretation, we recommend placing summaries on a raised platform on the floor of the galleries, similar to ones found in the Museum of Fine Arts. To complement this, gallery guides should include longer, more in-depth descriptions about artwork. Most visitors in the [remastered] gallery utilized the gallery guides but sought more information.

Materials that can be carried by the patron, such as the gallery guides and binders, provide more freedom within the gallery. Visitors can read descriptions and observe paintings from the comfort of the gallery chairs. Book carts contain a binder with an in-depth painting guide that recommends literature found on the cart, or further information regarding the artist or piece. These solutions provided information in multiple mediums, giving the visitor options. Prominent works can be marked in guides. Many [remastered] visitors struggled to find notable pieces such as the Rembrandt.

In order to engage younger audiences, a treasure or scavenger hunt should be made available for children and families. This engages children in the Renaissance artwork in a way the gallery itself cannot. Most families tracked in the observation study quickly passed through the gallery.

Many visitors attempted to engage with the exhibit with the iPads. During both weekends we spent in the galleries, however, the iPads malfunctioned. No staff was available to debug them. Visitors became frustrated and nearly three quarters of the patrons would leave the gallery altogether. We recommend that more staff be educated on iPad maintenance. Guards already

need to be in the galleries and could be able to troubleshoot without hindering their other responsibilities.

Another technological short-term solution we proposed is to make a Worcester Art Museum Snapchat alias. This is a free, modern way to advertise to a younger audience. By posting ads on social medias and asking people to follow on Snapchat, the museum could post SnapStories. SnapStories are 10 second photos or videos on Snapchat that are available for viewing for 24 hours for any followers of the user. This app, very commonly used by college students, could generate a lot of talk about the museum. This practice was implemented at the Los Angeles County Museum of Art and has been widely admired as a new approach to museum experience. We believe that this recommendation is a good solution for the museum to attract a wider audience.

Other short-term solutions came from our college survey results. Most students who had attended the museum came because of class and had a positive experience. We recommend contacting professors from colleges about incorporating the Worcester Art Museum into their curriculum. It is a free off-campus educational opportunity applicable to art history, history, drawing, and architecture classes. If done over email, it will be a free and time-efficient option. After analyzing the college surveys, a clear trend formed. Most college students were not aware they received free admission to the museum. Advertising on the college campuses located farther away from the Worcester Art Museum could increase awareness and the college demographic.

In addition to these short-term solutions, we have developed a list of potentially beneficial recommendations. These would be more time consuming and resource heavy for the long term mission of the museum. The first solution is to improve and update the existing audio tour to increase accessibility to information. Many patrons expressed having problems reading literature. Others wanted an abridged museum tour, where they were guided to highlights of the museum. We propose a numbered audio tour, where each piece is given a number that correlates to an informational audio clip. The audio tour would give patrons the freedom of learning more about paintings they find interesting.

Creating a smartphone app would supply a similar freedom to the audio tour. The app could supply painting summaries along with other features. This would give the patron the opportunity to further research information if desired. To maintain the app and the iPads located in the galleries, the museum could create a new position under the Director of Audience

Engagement. This person would be responsible for developing various technologies and integrating the museum into social medias, including Instagram, Twitter, Facebook, Snapchat, and others. They would assist in developing technologies incorporated into future exhibits. These technological solutions would give the [remastered] exhibit many more opportunities to provide visitors with freedom as well as direction in their gallery experience.

CHAPTER 6: CONCLUSION

After working at the Worcester Art Museum and the surrounding college campuses, we believe all aspects of the project had successful data collection and analysis. Over 500 college students completed the college student survey. With so many results, we were able to determine definite trends for each institution. The museum survey had fewer participants with a total slightly over 60. We analyzed the data to find trends among the museum visitors. The observation maps were successful, with 100 paths of visitors tracked for each gallery. Both galleries showed different walking trends and popular viewing spots.

From our surveys and observation study results, our final conclusion is that all data collected can be used as starting points for the museum to base future projects and exhibits. The data provides insight into the visitor's habits during both week and weekends in the winter months at the museum. The college student survey reveals the awareness students have of the Worcester Art Museum and their interest levels in the museum.

With our report, we hope the Worcester Art Museum is able to take one step closer to achieving its goal of becoming a cultural destination in New England.

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APPENDICES

APPENDIX A: SAMPLE INTERVIEW QUESTIONS

SAMPLE CURATOR QUESTIONS

1. How do you feel about adding interactive elements to galleries that feature older works of art (e.g. Renaissance artwork)?
2. What is your view on removing descriptions from the wall next to the artwork?
3. What elements do you consider when staging a gallery?
4. What direction do you see traditional art museums moving towards in the future? Do you personally agree with this direction?

APPENDIX B: SURVEY QUESTIONS

[REMASTERED] RENAISSANCE GALLERY SURVEY

WORCESTER ART MUSEUM
worchesterart.org

[remastered] Renaissance Gallery

1. General Information

1. Age:

- Under 10
- 10-18
- 19-25
- 26-35
- 36-45
- 46-55
- 56-65
- 66-75
- 76+

2. Gender:

- Male
- Female
- Prefer not to disclose

3. Education Level:

- No High School
- Some High School
- High School
- Some College
- College
- Graduate
- Doctorate

4. Are you a Museum Member?

- Yes
- No

WORCESTER ART MUSEUM [remastered] Renaissance Gallery
worcesterart.org

2. In the Gallery

5. Is this your first visit to the Worcester Art Museum?

Yes
 No

6. Are you here for academic or recreational purposes?

Academic
 Recreational
 Neither
 Both

7. How would you rate your gallery experience?

Worst Average Best

8. Where would painting descriptions be most helpful? Select all that apply.

On the Wall
 In the iPad
 Audio Tour
 In a Guide Book
 None

9. Did you use the iPads or the Book Cart during your visit?

iPad and Book Cart
 iPad
 Book Cart
 None

10. How would you rate your gallery experience?

Worst Average Best

WORCESTER ART MUSEUM [remastered] Renaissance Gallery
worcesterart.org

3. iPad Specific

11. Was the iPad easy to use?

Yes
 No

12. Describe your viewing experience.

Below Average Average Above Average

13. Describe the text size.

Too Small
 Just Right
 Too Large

14. Could you find the painting description you were looking for?

Yes
 No
 Just Browsing

WORCESTER ART MUSEUM
worcesterart.org

[remastered] Renaissance Gallery

4. Gallery Experience

15. Which seating set up did you enjoy? Select all that apply.

Stationary Benches
 Movable Chairs
 Neither/Did not use

16. Did you use the Guide Books?

Yes
 No
 Did Not See Them

17. How did you react to the tilted paintings?

Negative Indifferent Positive

Feel free to describe your reaction.

WORCESTER ART MUSEUM
worcesterart.org

[remastered] Renaissance Gallery

5. Your opinions are valued!

18. Would you recommend the exhibit to a friend?

Yes
 No

19. Comments or Suggestions?

COLLEGE STUDENT SURVEY

WORCESTER ART MUSEUM
worchesterart.org

Worcester Art Museum: College Student Perspective

1. General Information

1. What school do you go to?

- Assumption
- Becker
- Clark
- Holy Cross
- Worcester State
- WPI

2. Gender:

- Male
- Female
- Prefer not to disclose

3. What is your interest in art?

Low Average High

4. How do you define your art education?

- Professional
- Specialist/Expert
- Pursuing a college degree
- College Classes
- High School Classes
- Elementary Art
- None

5. Have you ever been to the Worcester Art Museum?

- Yes
- No

WORCESTER ART MUSEUM
worchesterart.org

Worcester Art Museum: College Student Perspective

2. Specifics

6. What has stopped you from visiting? Check all that apply.

- Did not know it existed
- Too far away
- Cost of admission
- Interested but no time
- Not interested
- Other (please specify)

WORCESTER ART MUSEUM
worcesterart.org

Worcester Art Museum: College Student Perspective

2. Specifics

6. What brought you to the museum? Check all that apply.

- Free Admission
- Class
- Recreational School Trip
- Interest in art
- Bored
- Other (please specify)

7. What was your favorite aspect?

8. Would you recommend the museum to a friend?

- Yes
- No

WORCESTER ART MUSEUM
worcesterart.org

Worcester Art Museum: College Student Perspective

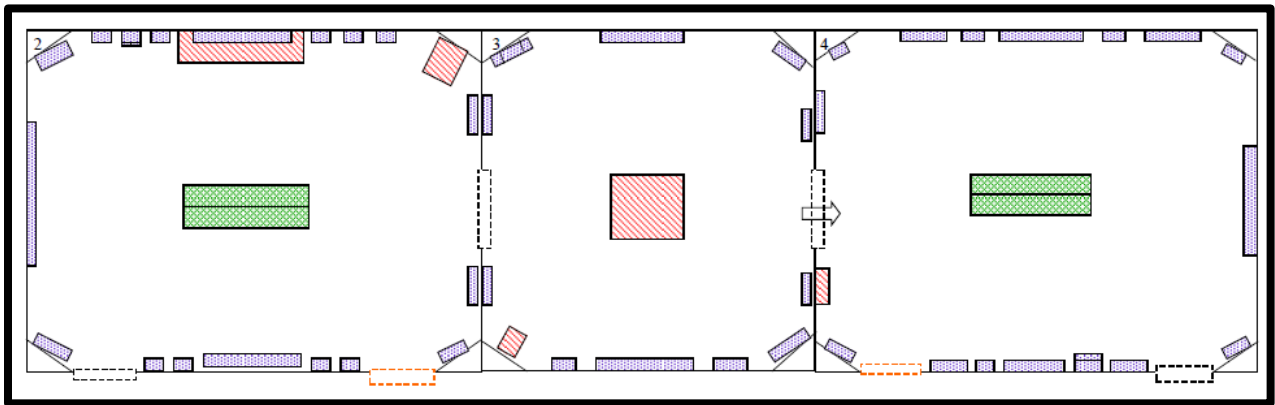
3. Thank you for your time!

9. Did you know that visiting the museum is free for Worcester college students?

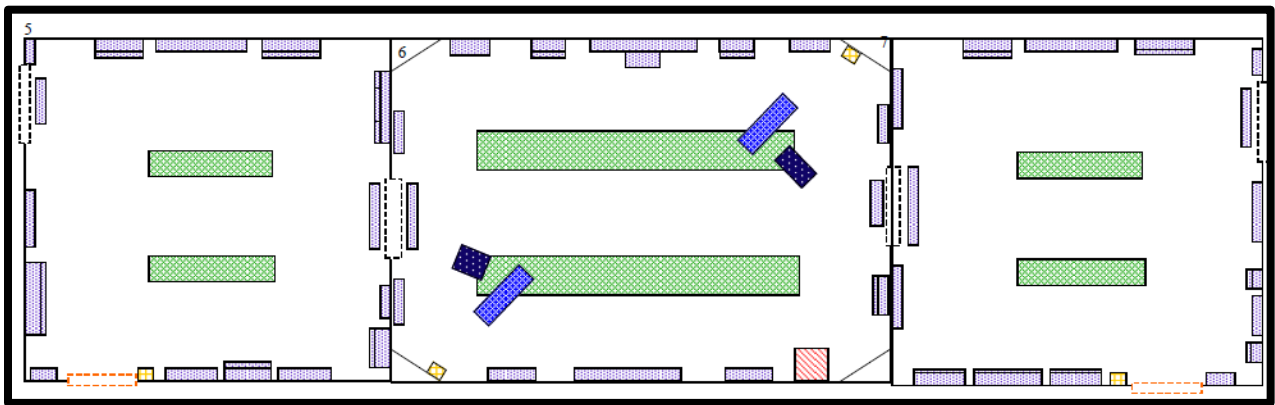
- Yes
- No

10. Comments or Suggestions?

APPENDIX C: OBSERVATION MAPS

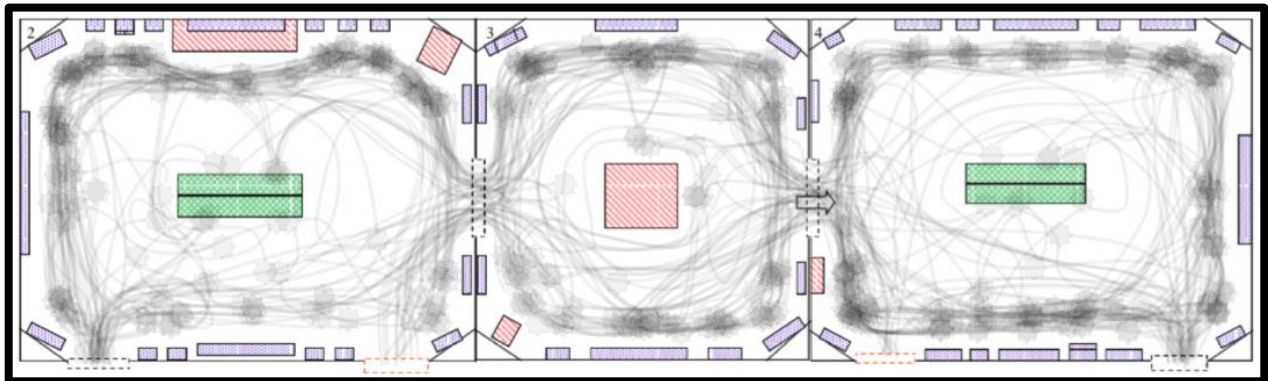


2D Map of Traditional gallery; rendering created by Grace Davis

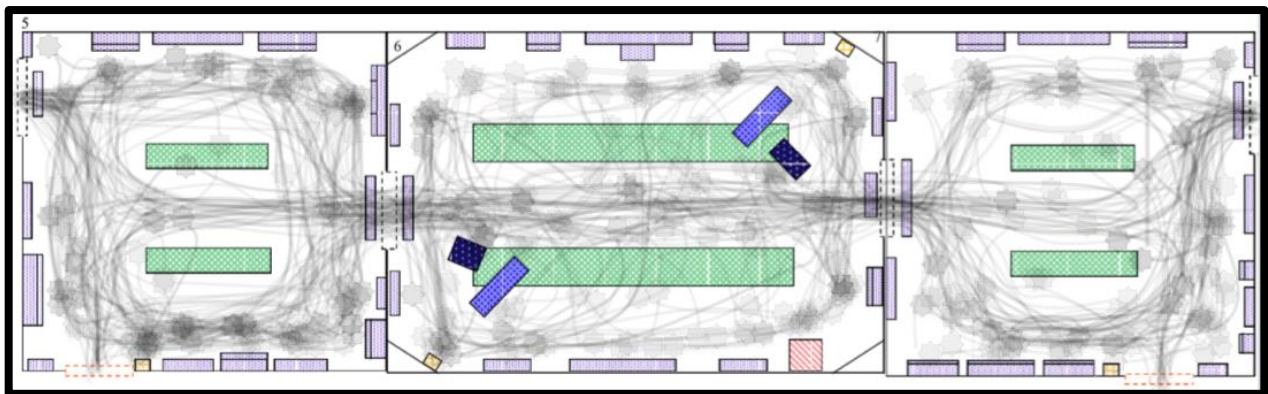


Observation Map of [remastered] gallery; rendering created by Grace Davis

APPENDIX D: FINAL OBSERVATION MAPS

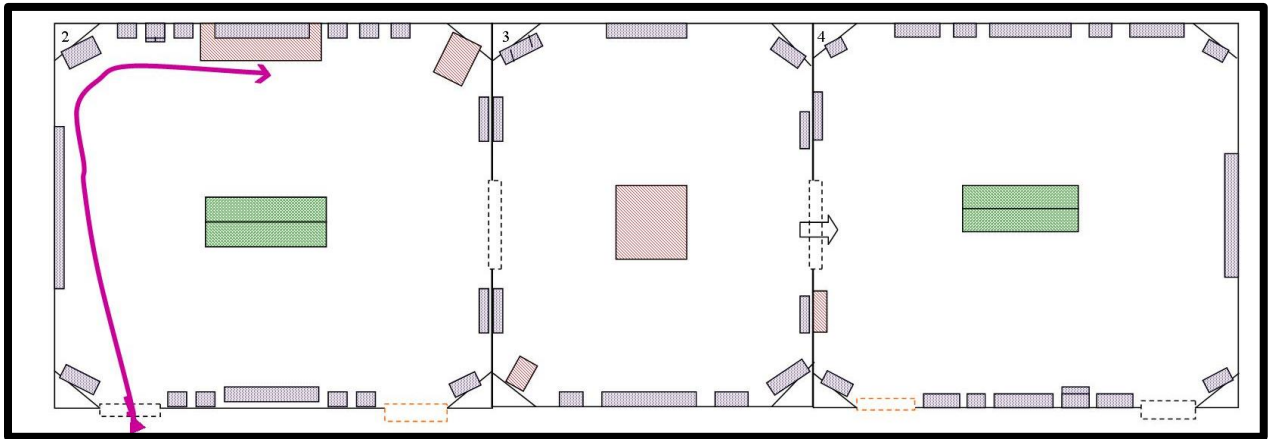


Observation Map of Traditional Gallery; compiled and digitized by Erin Murphy

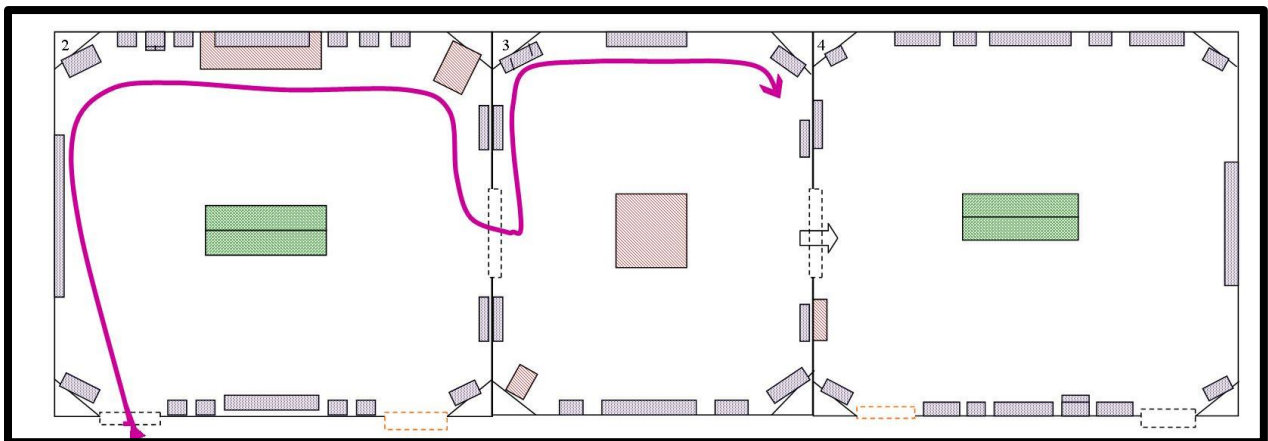


Observational Map of [remastered] gallery; compiled and digitized by Erin Murphy

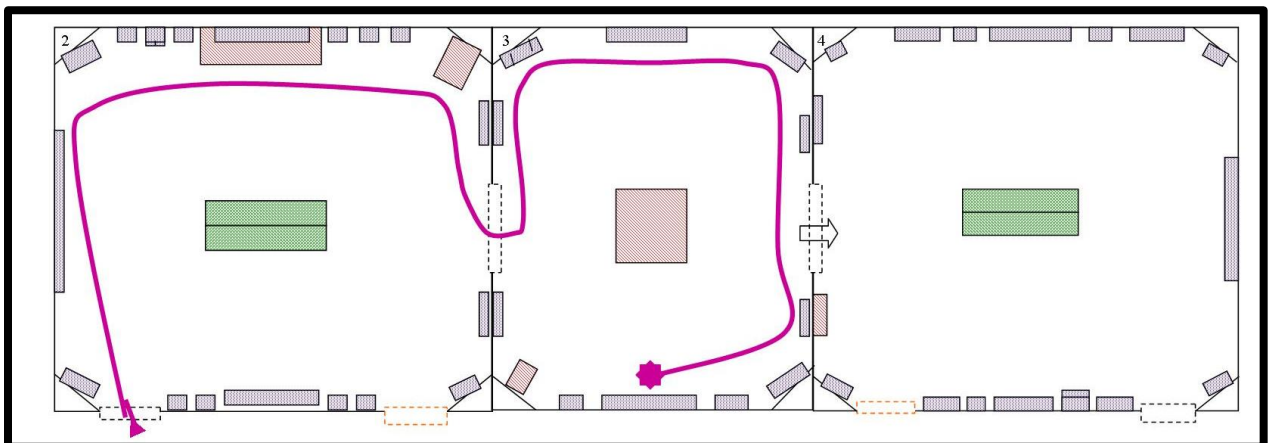
APPENDIX E: TRADITIONAL GALLERY PATH RENDERING



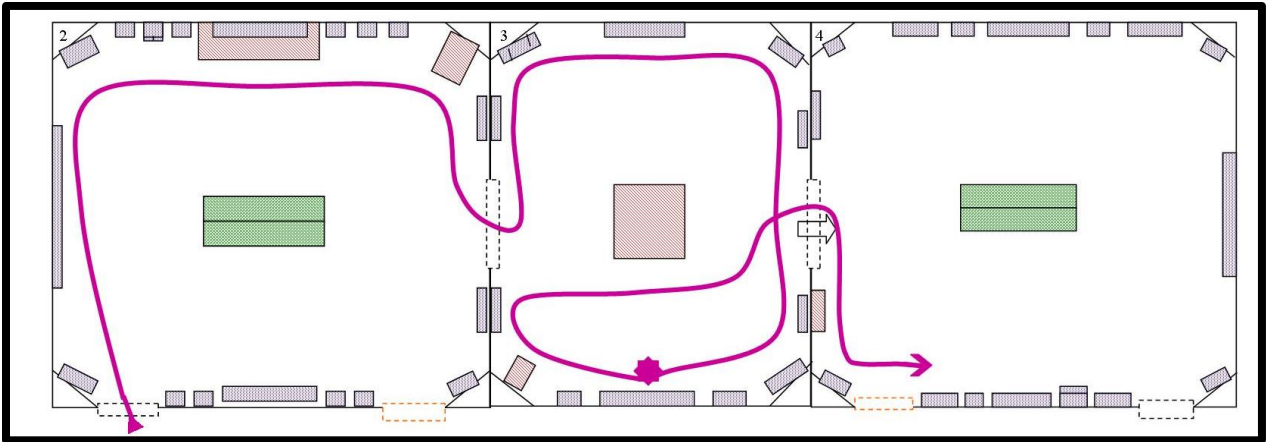
Traditional Gallery Path Rendering Step 1



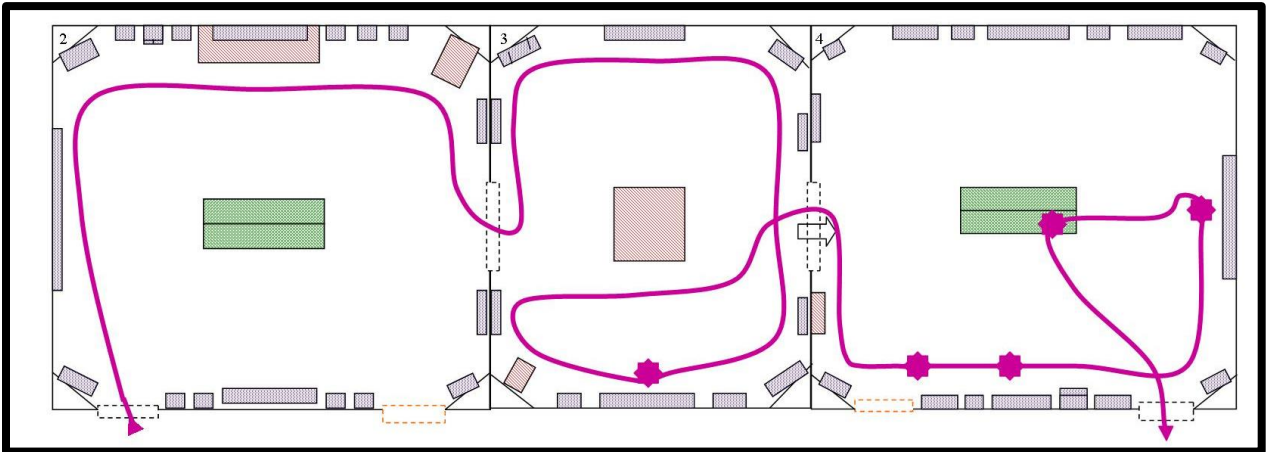
Traditional Gallery Path Rendering Step 2



Traditional Gallery Path Rendering Step 3

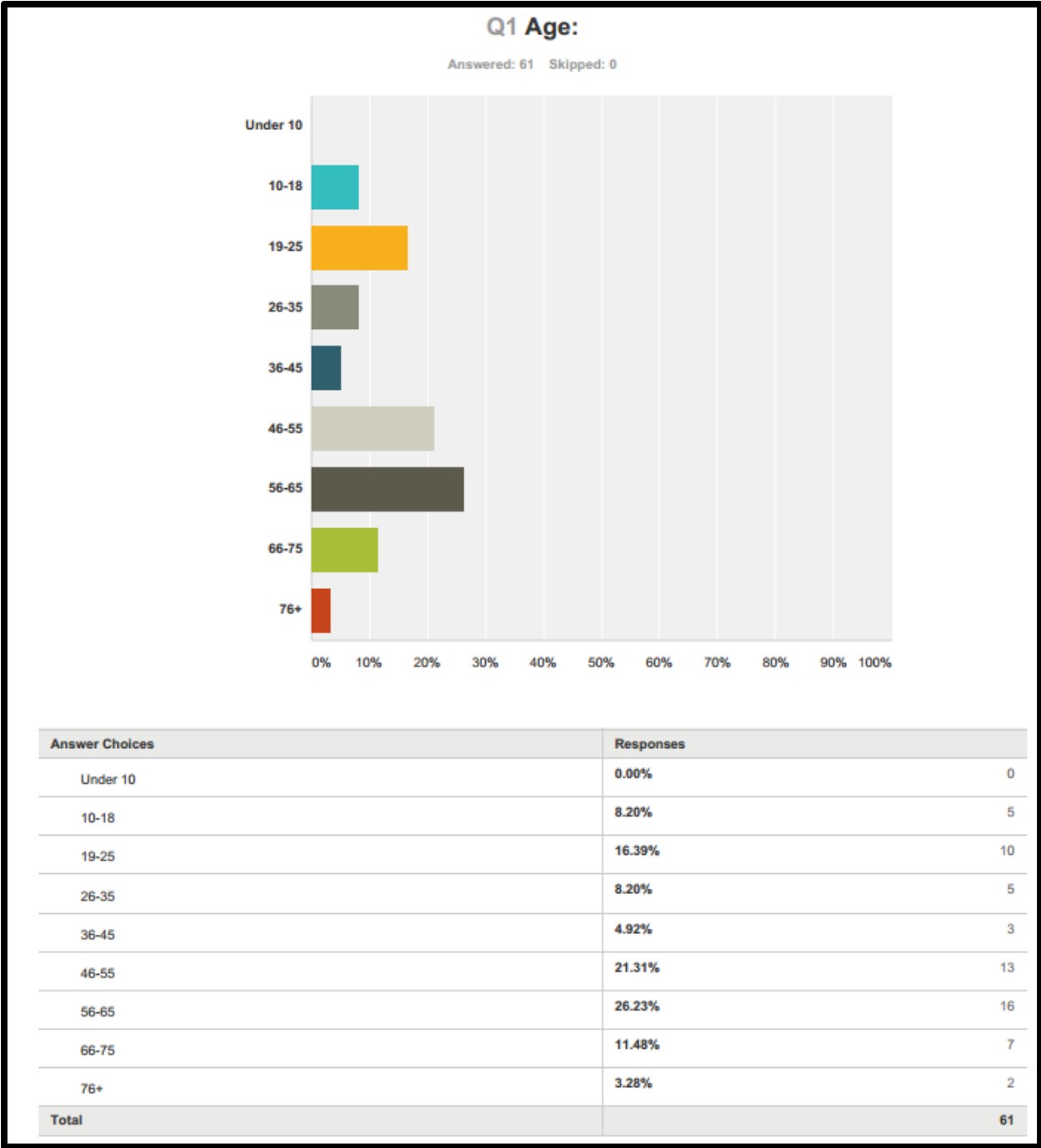


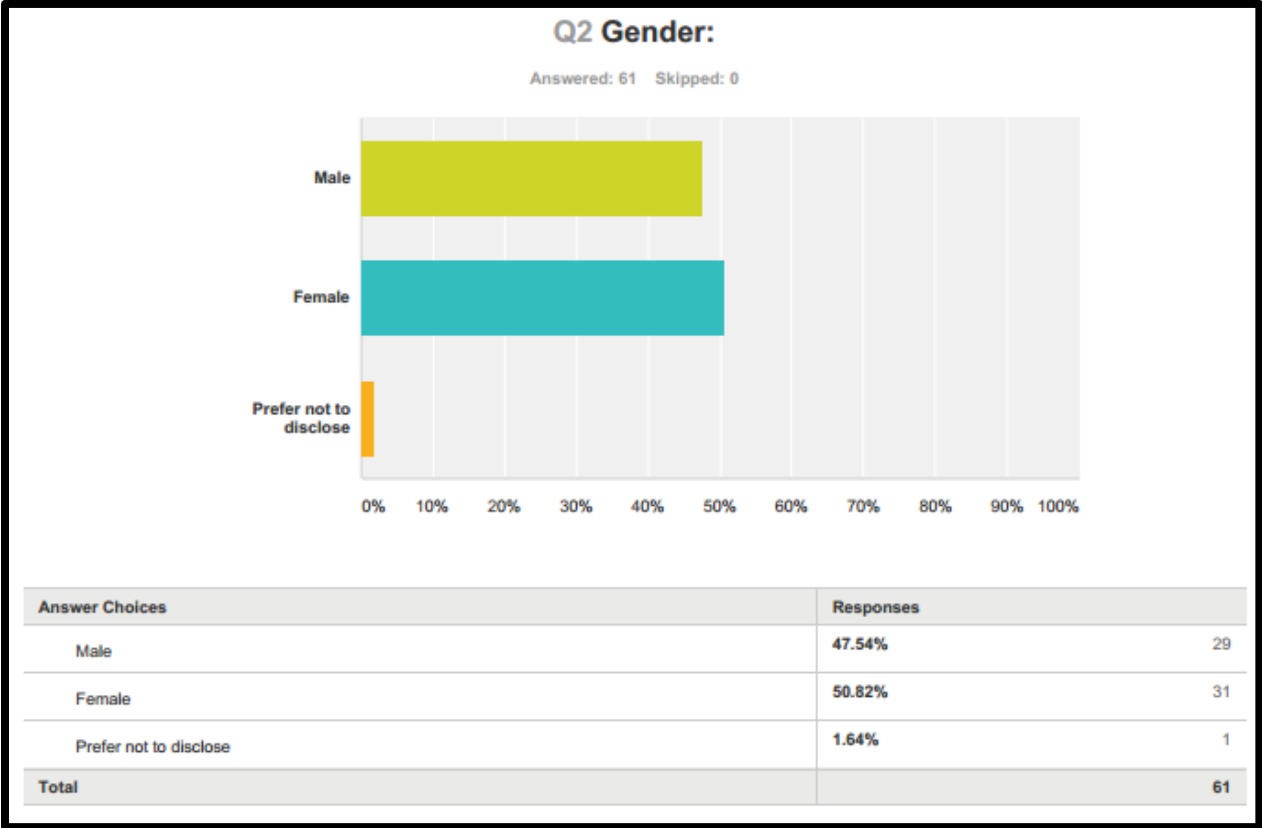
Traditional Gallery Path Rendering Step 4

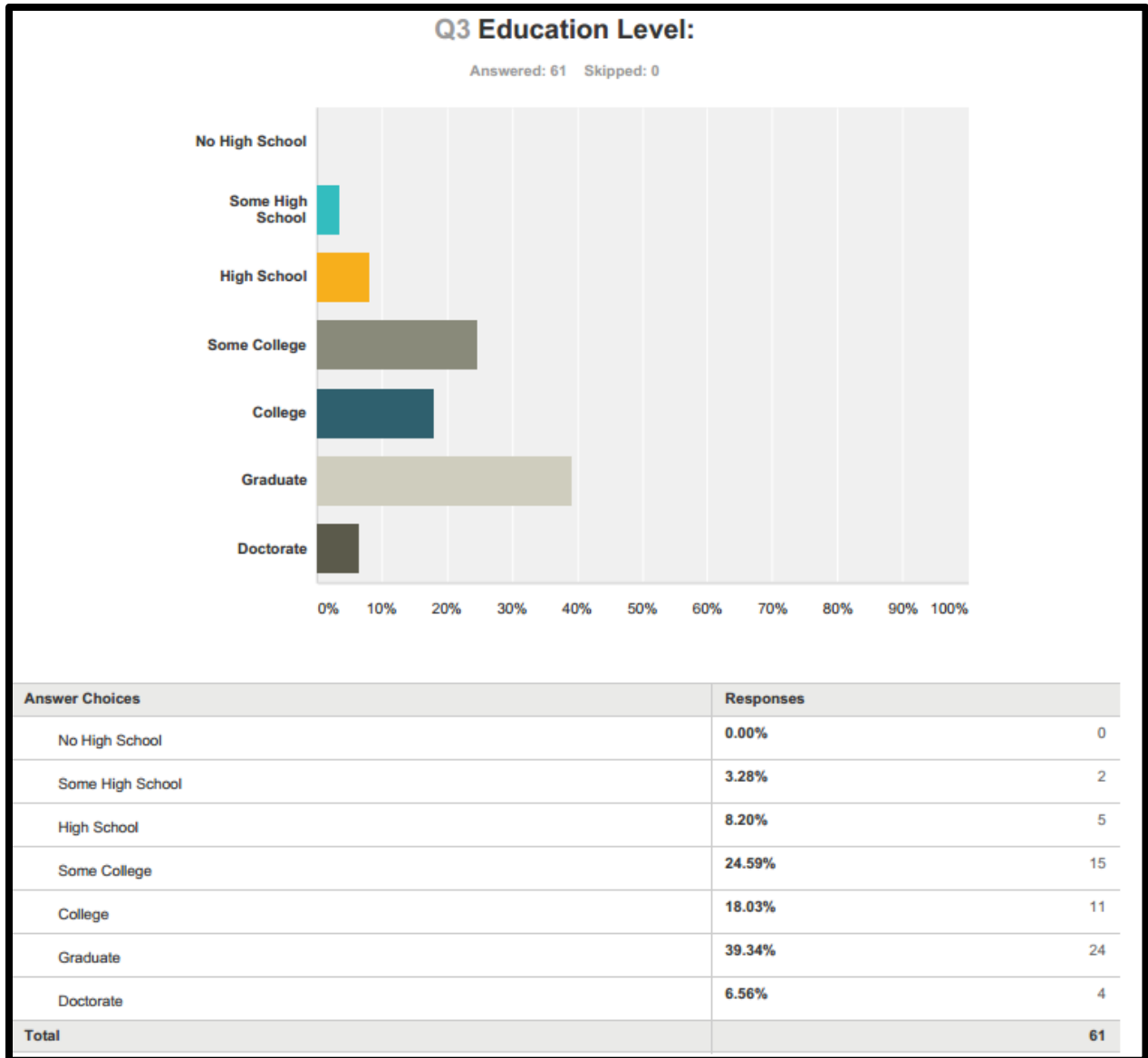


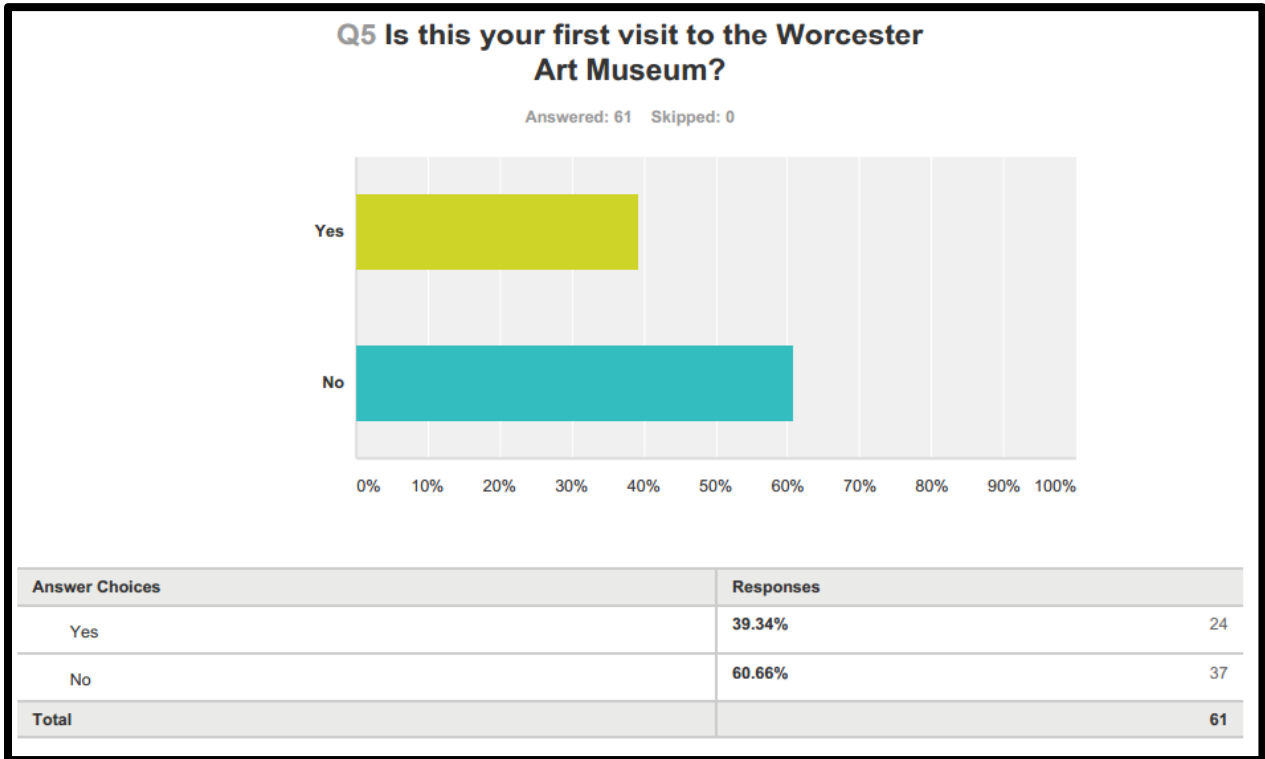
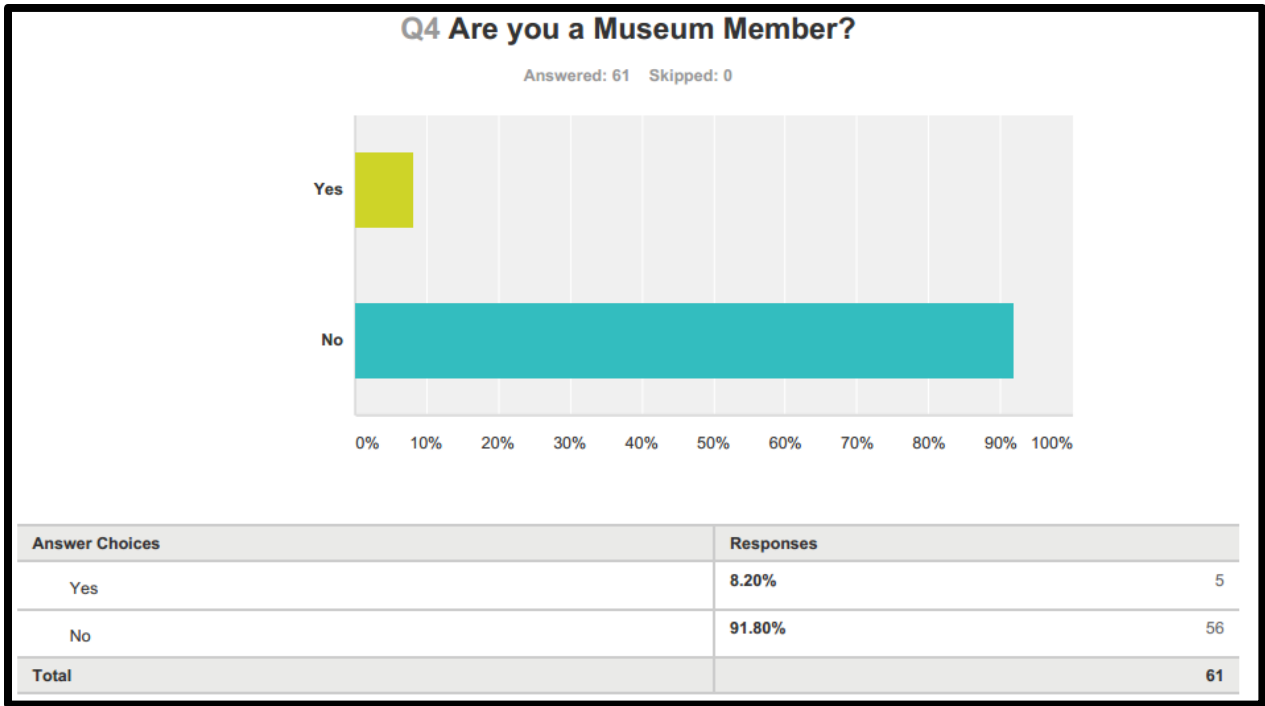
Traditional Gallery Path Rendering Final

APPENDIX F: WORCESTER ART MUSEUM SURVEY DATA



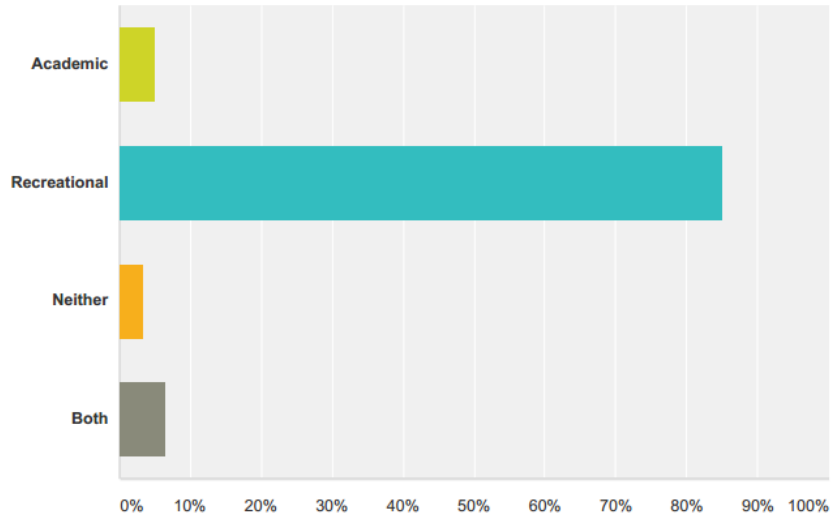






Q6 Are you here for academic or recreational purposes?

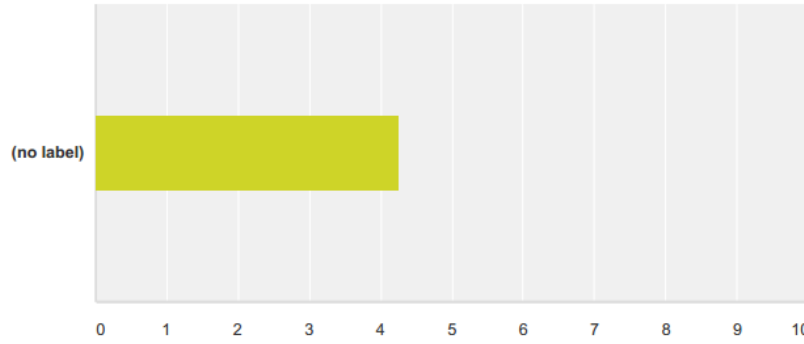
Answered: 61 Skipped: 0



Answer Choices	Responses	
Academic	4.92%	3
Recreational	85.25%	52
Neither	3.28%	2
Both	6.56%	4
Total		61

Q7 How would you rate your gallery experience?

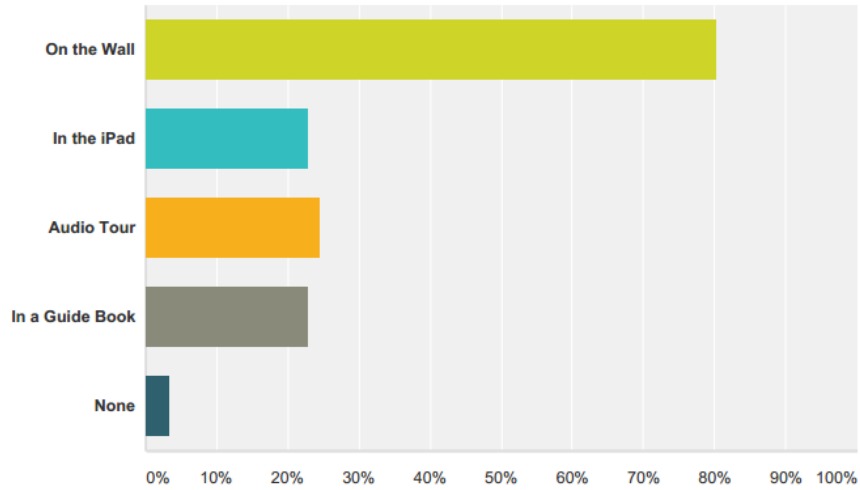
Answered: 61 Skipped: 0



	Worst	(no label)	Average	(no label)	Best	Total	Weighted Average
(no label)	0.00%	0.00%	9.84%	55.74%	34.43%	61	4.25
	0	0	6	34	21		

Q8 Where would painting descriptions be most helpful? Select all that apply.

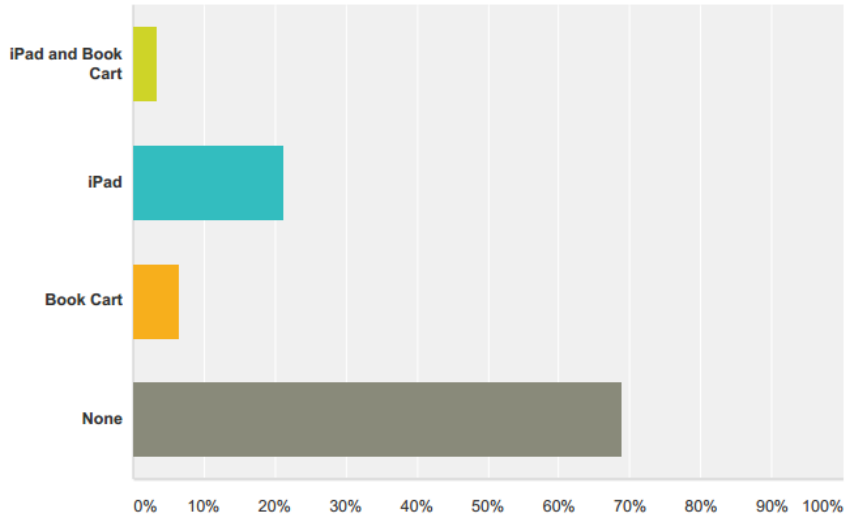
Answered: 61 Skipped: 0



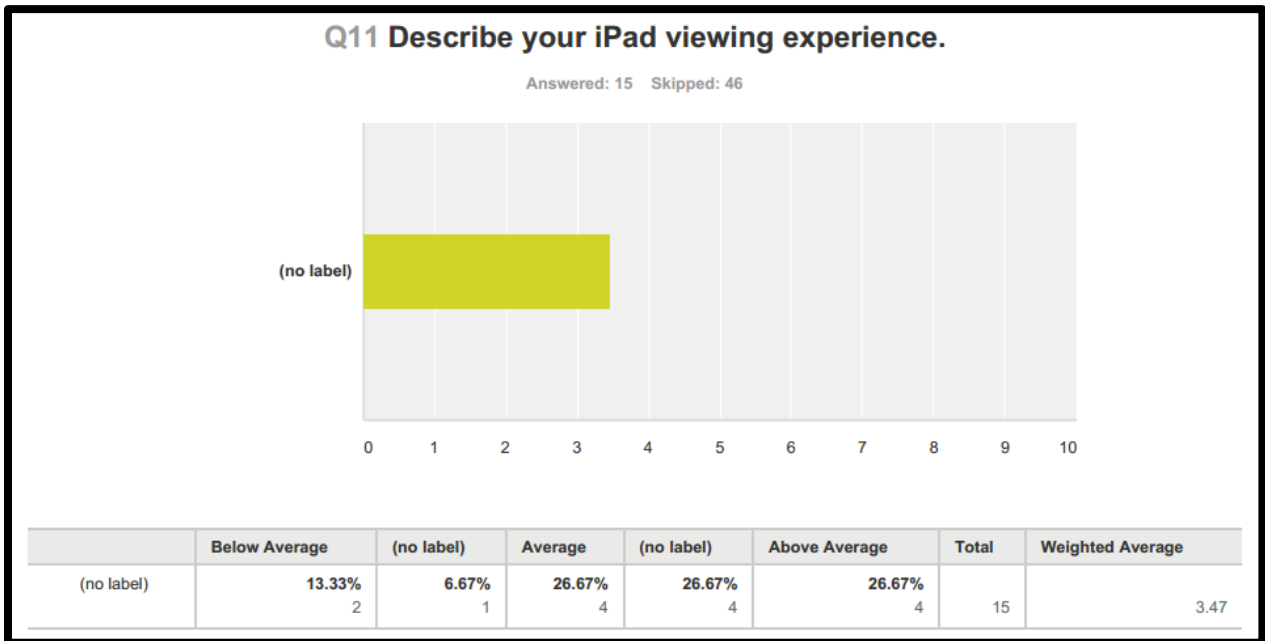
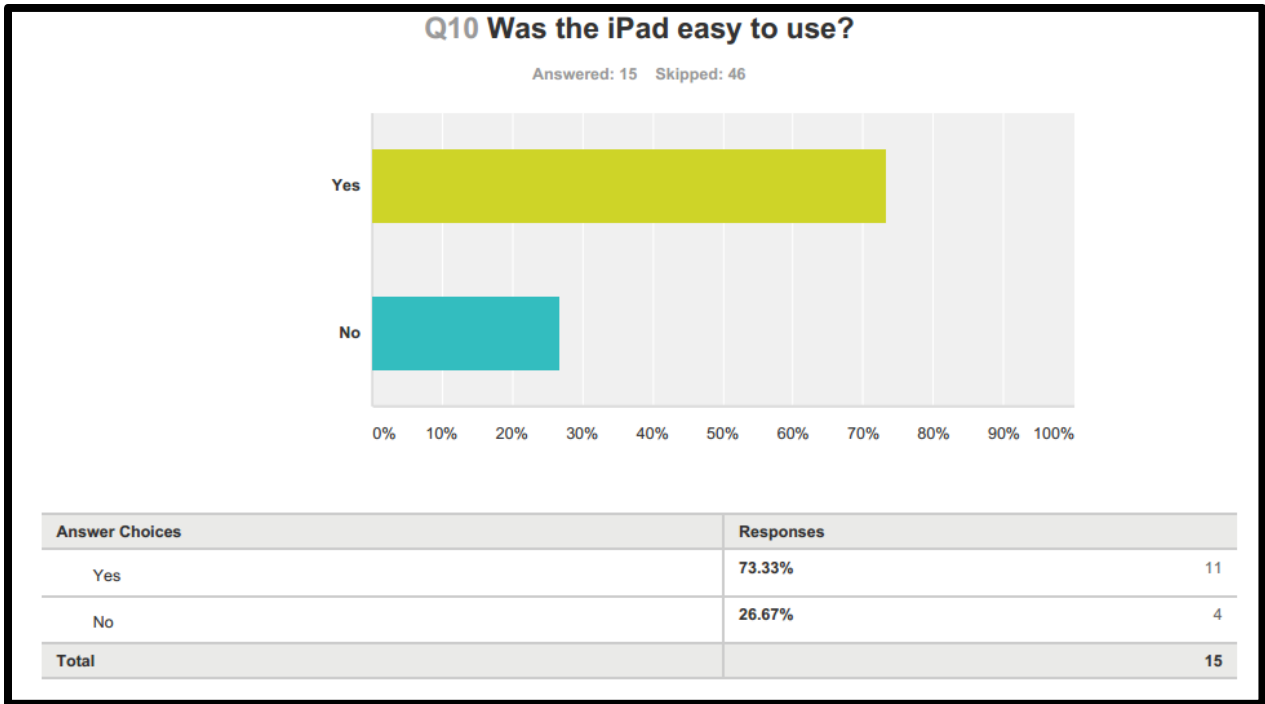
Answer Choices	Responses
On the Wall	80.33% 49
In the iPad	22.95% 14
Audio Tour	24.59% 15
In a Guide Book	22.95% 14
None	3.28% 2
Total Respondents: 61	

Q9 Did you use the iPads or the Book Cart during your visit?

Answered: 61 Skipped: 0

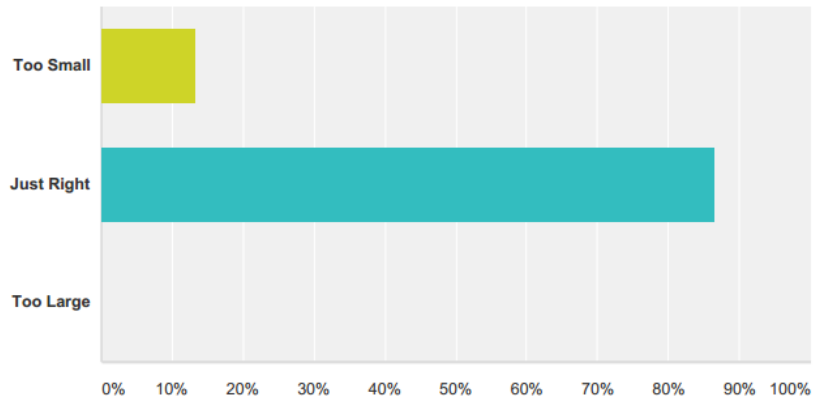


Answer Choices	Responses
iPad and Book Cart	3.28% 2
iPad	21.31% 13
Book Cart	6.56% 4
None	68.85% 42
Total	61



Q12 Describe the text size on the iPad.

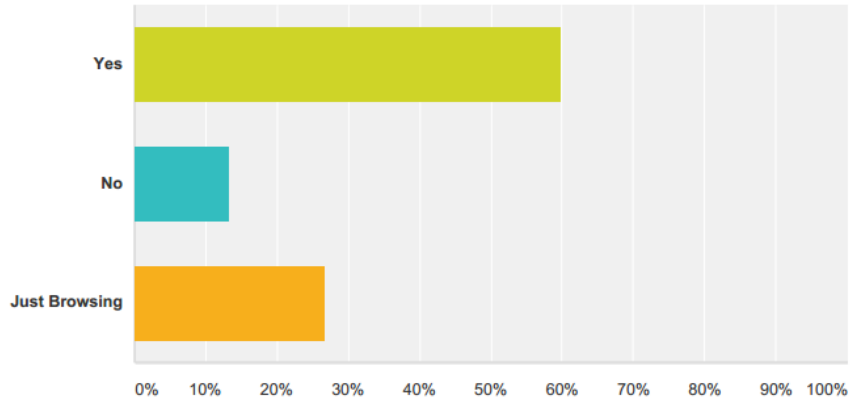
Answered: 15 Skipped: 46



Answer Choices	Responses
Too Small	13.33% 2
Just Right	86.67% 13
Too Large	0.00% 0
Total	15

Q13 Could you find the painting description you were looking for?

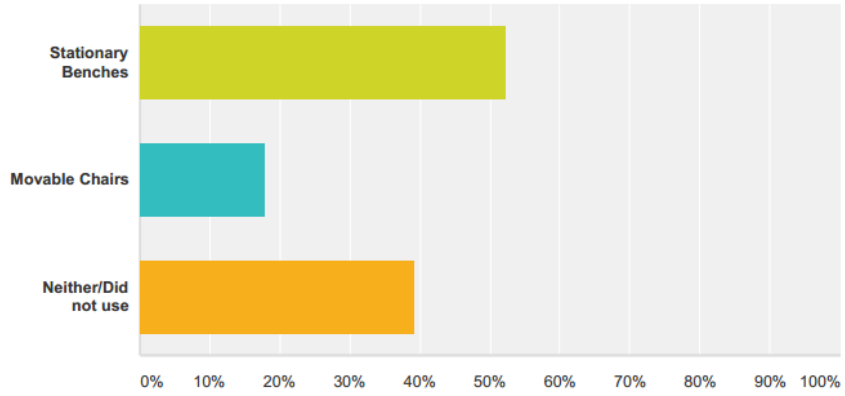
Answered: 15 Skipped: 46



Answer Choices	Responses	
Yes	60.00%	9
No	13.33%	2
Just Browsing	26.67%	4
Total		15

**Q14 Which seating set up did you enjoy?
Select all that apply.**

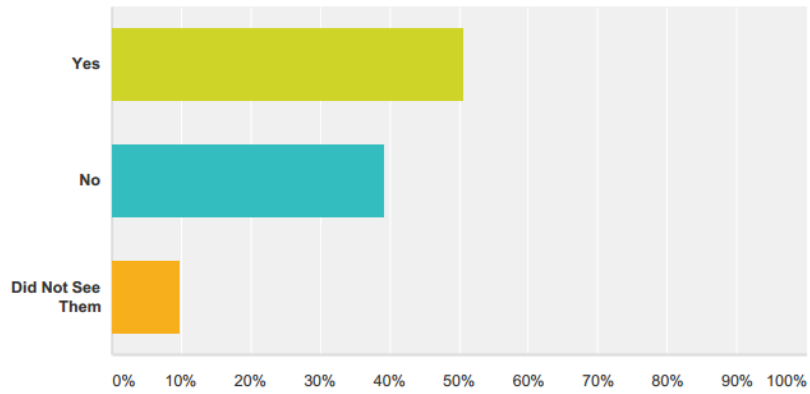
Answered: 61 Skipped: 0



Answer Choices	Responses
Stationary Benches	52.46% 32
Movable Chairs	18.03% 11
Neither/Did not use	39.34% 24
Total Respondents: 61	

Q15 Did you use the Guide Books (pamphlets placed within each gallery containing painting descriptions; located near iPads or entrances)?

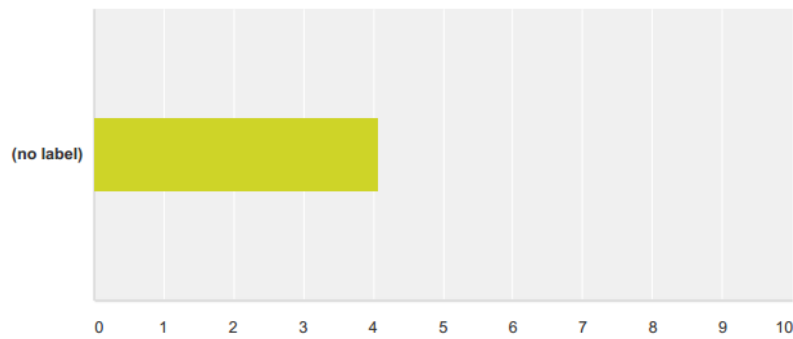
Answered: 61 Skipped: 0



Answer Choices	Responses	
Yes	50.82%	31
No	39.34%	24
Did Not See Them	9.84%	6
Total		61

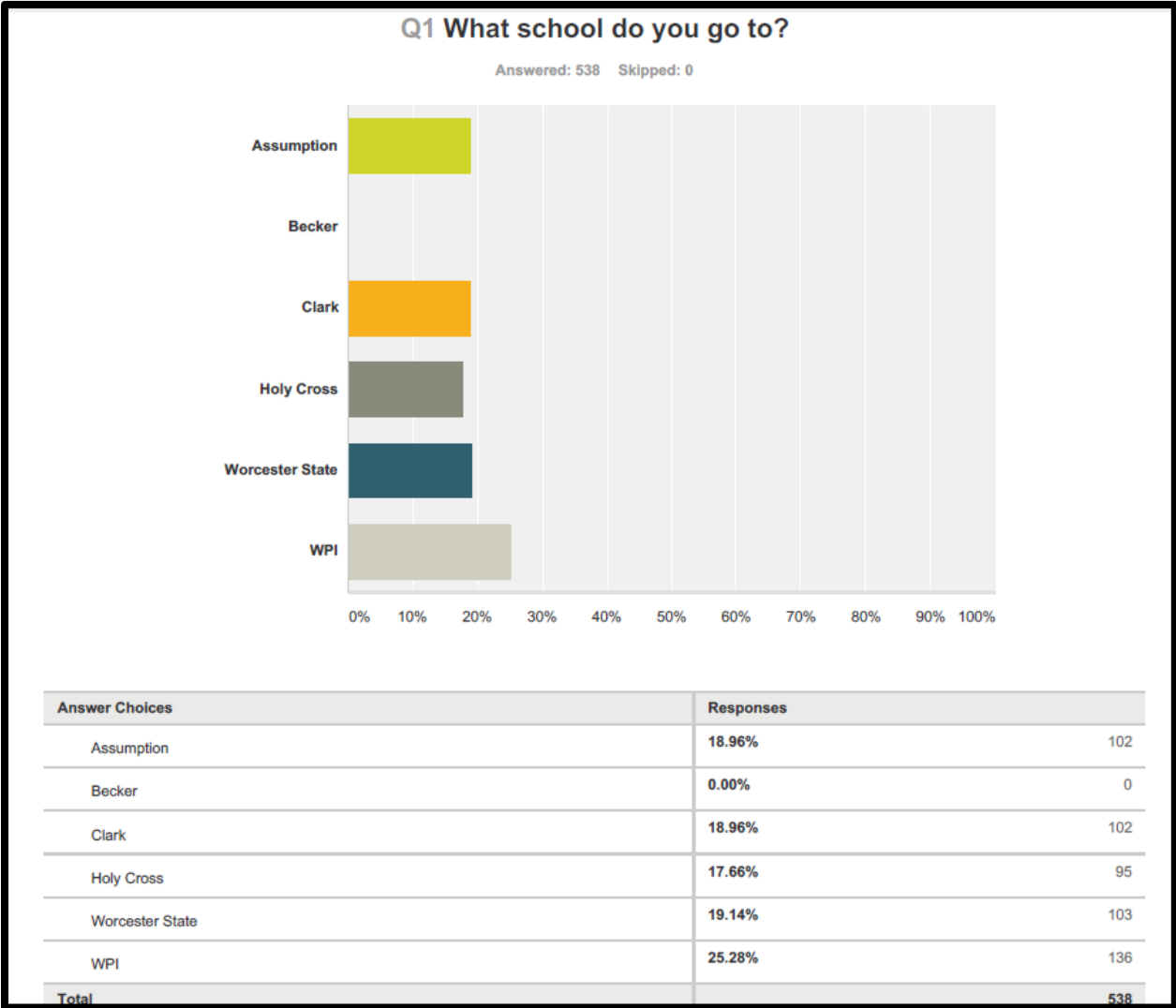
Q16 How did you react to the tilted paintings?

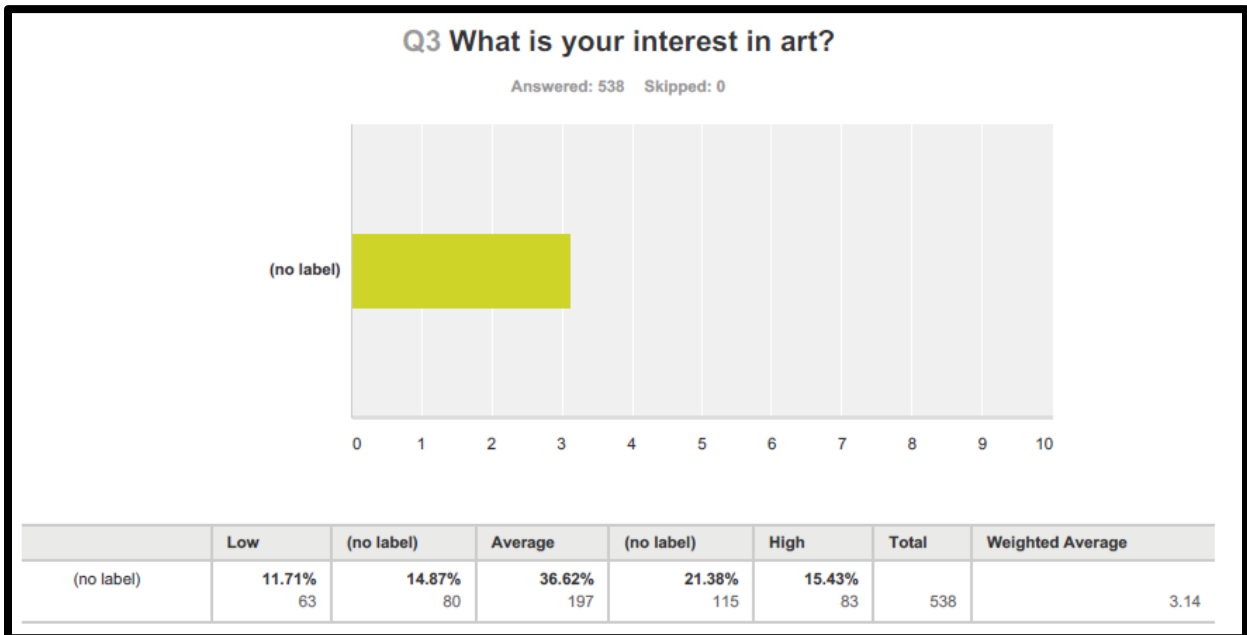
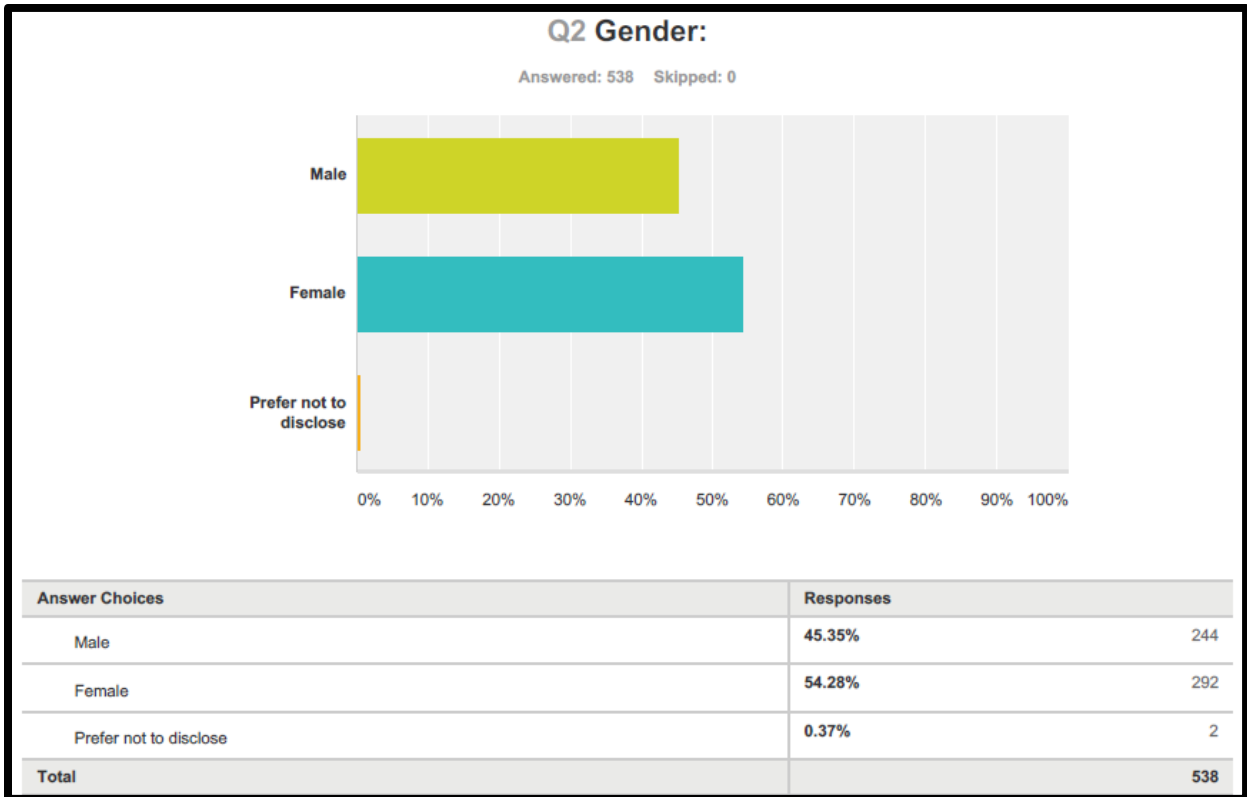
Answered: 61 Skipped: 0



	Negative	(no label)	Indiferent	(no label)	Positive	Total	Weighted Average
(no label)	0.00%	3.28%	26.23%	31.15%	39.34%	61	4.07
	0	2	16	19	24		

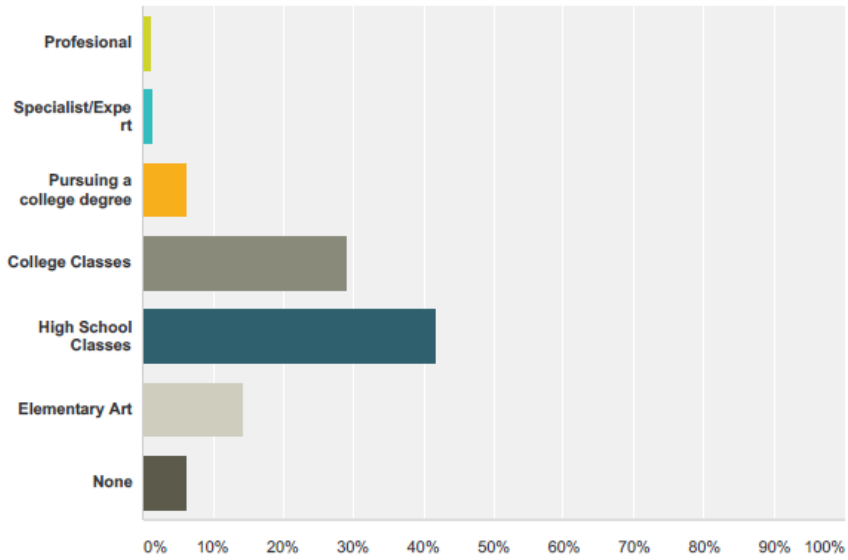
APPENDIX G: COLLEGE SURVEY DATA





Q4 How do you define your art education?

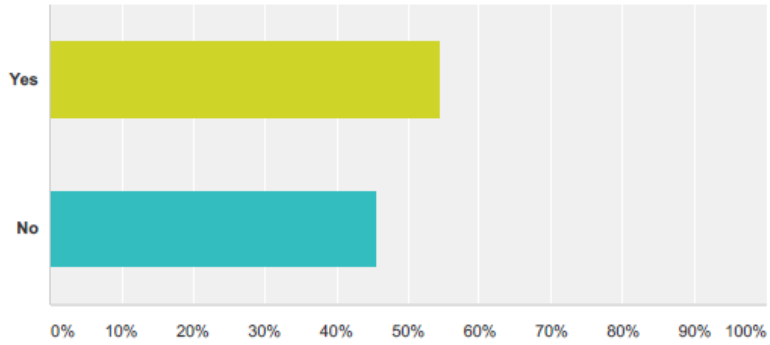
Answered: 538 Skipped: 0



Answer Choices	Responses
Professional	1.12% 6
Specialist/Expert	1.30% 7
Pursuing a college degree	6.32% 34
College Classes	29.00% 156
High School Classes	41.82% 225
Elementary Art	14.13% 76
None	6.32% 34
Total	538

Q5 Have your ever been to the Worcester Art Museum?

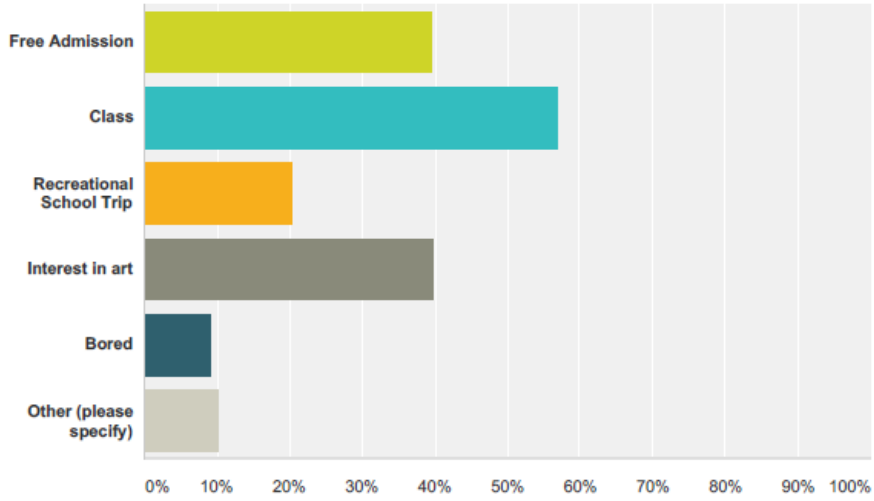
Answered: 538 Skipped: 0



Answer Choices	Responses	
Yes	54.46%	293
No	45.54%	245
Total		538

**Q6 What brought you to the museum?
Check all that apply.**

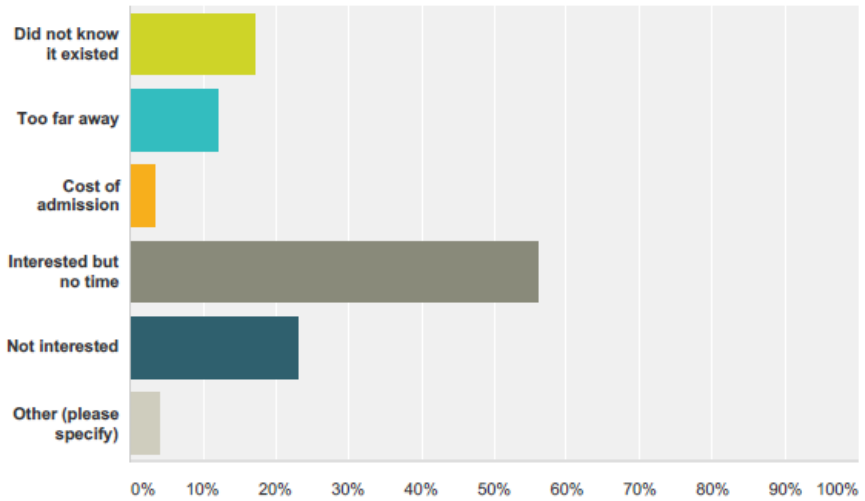
Answered: 293 Skipped: 245



Answer Choices	Responses
Free Admission	39.59% 116
Class	57.00% 167
Recreational School Trip	20.48% 60
Interest in art	39.93% 117
Bored	9.22% 27
Other (please specify)	10.24% 30
Total Respondents: 293	

**Q8 What has stopped you from visiting?
Check all that apply.**

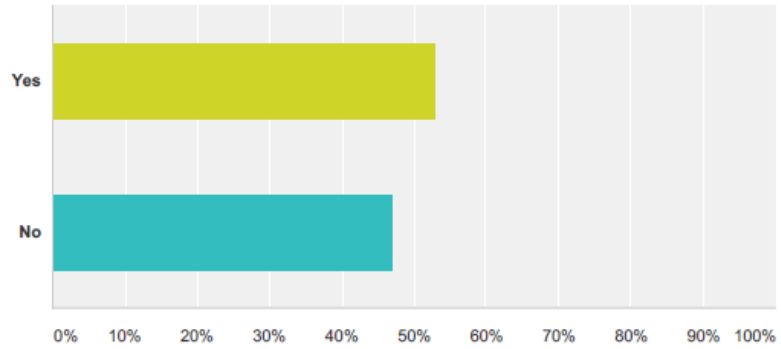
Answered: 258 Skipped: 280



Answer Choices	Responses
Did not know it existed	17.05% 44
Too far away	12.02% 31
Cost of admission	3.49% 9
Interested but no time	56.20% 145
Not interested	23.26% 60
Other (please specify)	4.26% 11
Total Respondents: 258	

Q9 Did you know that visiting the museum is free for Assumption, Clark, Holy Cross, WPI, and Worcester State students?

Answered: 538 Skipped: 0



Answer Choices	Responses	
Yes	52.97%	285
No	47.03%	253
Total		538