Evaluating Engagement with Art at Hampton Court Palace

An Interactive Qualifying Project Report submitted to the Faculty of

WORCESTER POLYTECHNIC INSTITUTE

in partial fulfillment of the requirements for the degree of Bachelor of Science

Emilia Krum

Juliet Morin

Moet O'Donnell

Joseph Saladino

28 June 2023

Sponsor

Mr. Aaron Manning

Advisors

Dr. John-Michael Davis

Dr. Jason Davis

HISTORIC ROYAL PALACES

WPI

Abstract

Historic Royal Palaces is opening the Wolsey Rooms to showcase Tudor art at Hampton Court Palace (HCP) in 2024. Our project evaluated visitor segmentation and art engagement at HCP to inform the design of the Wolsey Rooms. We conducted 4 semi-structured staff interviews to better understand their goals for visitor engagement coupled with 196 observations, 46 surveys, and 110 interviews at Henry VIII's State Apartments, Cumberland Art Gallery, and William III's Apartments to understand how visitors engage with art at HCP. Our findings suggested that visitors preferred well-lit rooms, more information on displays, and personal stories of historical figures. For the Wolsey Rooms, we recommend that HCP adheres to visitor preferences while maintaining the historical atmosphere of the exhibit.

Acknowledgements

Table of Contents

List of Figures

List of Tables

Executive Summary

Introduction

In 2018-2019, roughly 72% of England's residents aged 16 and older said they visited a heritage or historic site within the past year (Department for Digital, Culture, Media and Sport, 2021). One classification of heritage sites is historic houses, the former homes of historic figures that have been converted into museums and are open to visitors. These sites play a distinct role in London heritage by providing visitors with a personal and emotional connection to some of the city's most notable figures and events. Historic Royal Palaces (HRP), a charity organization that manages six unoccupied royal palaces in the UK, is dedicated to creating a "space for spirits to stir and be stirred," where visitors can feel welcomed, encouraged to explore, and learn the stories of the monarchs (*Official Site*, n.d.).

HRP commissioned this study to evaluate visitor engagement with art in preparation for the opening of the Wolsey Rooms in 2024 at one of HRP's palaces, Hampton Court Palace (HCP). The Wolsey Rooms will showcase a collection of Tudor portraits and paintings, immersing visitors in the world of the 16th century. The goal of this project was to evaluate visitor segmentation and art engagement at Henry VIII's State Apartments (HSA), Cumberland Art Gallery (CAG), and William III's Apartments (WA) to understand of how visitors engage with art at HCP's exhibits to inform the design of the upcoming Wolsey Rooms. To achieve this goal, our team had two main objectives:

1. Understand HRP staff intentions and expectations for visitor engagement.

2. Assess interpretive techniques and visitor engagement with art at HCP.

Methods

For our first objective we conducted semi-structured interviews with three HRP staff members who helped create the three exhibits, and one staff who has experience working directly with visitors. We conducted interviews with Aileen Peirce (Head of Interpretation and Design), Brett Dolman (HCP Curator of Collections), and Eva Koch-Schutle (Executive Producer) to understand the history of the exhibits, the thought process of designing an exhibit, and the staff perspective/goals for visitor engagement. We also interviewed Aurora Heimsath (Leader of the Palace Host Team) to aid our process of visitor observation and learn how the

operational staff saw visitors engage with art. These interviews took place either in-person or virtually, involved asking 5 to 8 questions, and lasted between 30 to 60 minutes.

For our second objective, we used visitor observation, surveys, and interviews to understand how visitors interact with art in HCP. We conducted an observation study of 196 visitors, documenting their emotional reactions to the art (e.g., curious, focused, uninterested, etc.) and physical behavior (e.g., reading signs, speaking to others, wandering/stopping, etc.) within the exhibit. To supplement our observation data, we conducted visitor surveys and interviews. We surveyed 46 visitors upon their exit from the exhibit to learn how they engaged with art, their overall reaction to the exhibit, and their motivations for coming to HCP. Our visitor interviews complemented the surveys as we asked visitors open-ended questions regarding the most engaging part of the exhibit, whether any part of the exhibit evoked emotion, and if any part of the exhibit made them consider history more deeply. In total we collected 110 responses for our 3 interview questions. We used a combination of inductive coding and quantitative data analysis to identify major themes across our visitor observation, survey, and interview data.

Findings

We categorized the data collected from the visitor observations, surveys, and interviews, into five areas: staff expectation for visitor engagement, lighting, information displays, historical context and immersion, and connection to audience segmentation. Across all staff interviews, there were two goals that stood out among the staff members: to create an experience that draws the visitors in, and to have exhibits to provoke emotional engagement from the visitors. Based on our visitor responses we found three improvements that visitors wanted: better lighting for the artworks, more signage and explanation of pieces, and personal engagement with the historical figures. Visitors across all three of the exhibits rated the lighting of the exhibit on a scale from 1 to 5, with 1 being the worst and 5 being the best. Lighting was rated between 3.47 to 3.63, which means that visitors found lighting "ok" to "good" and enjoyed the other aspects of the exhibit more (see Figure I).
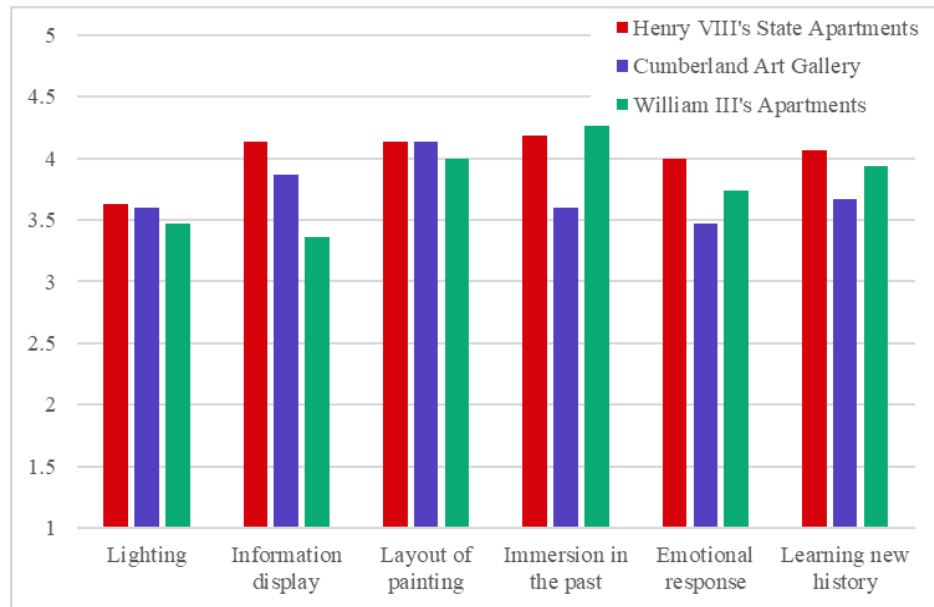
Figure I: Bar graph comparing the average rating visitors gave to six aspects of the exhibits in the surveys (1 is bad and 5 is great)

Based on our observations in HSA and the CAG, 53% and 63% of visitors respectively read any kind of signage in the exhibit (see Figure II). From observation data of WA there was less engagement with signage at 33%. One survey response stated that "there's very little information about the artwork."
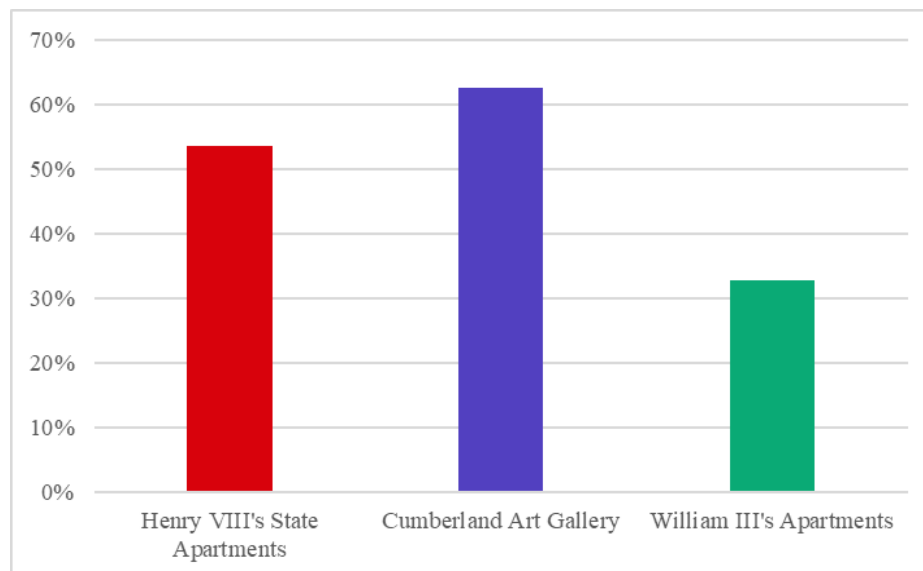
Figure II: The average percentage of visitors who read informative displays across all exhibits from observations

Across responses to all 3 interview questions, visitors to HSA emphasized the importance of being immersed in the past; 16 of all 36 responses (44%) mentioned history or being immersed in the past as factors that positively impacted their experience. Similarly, when asked about which part of the exhibit evoked emotion in WA, 7 out of 13 interview responses mentioned royalty, which shows a relationship between visitors learning about royalty and emotional response.

Our findings show the majority of HRP's audience can be categorized in the explorer segmentation group. Although visitors can fall into multiple segmentation groups (9 of 46 visitors), we found that a total of 31 out of 46 visitors (67%) across all three exhibits were explorers (see Figure III).
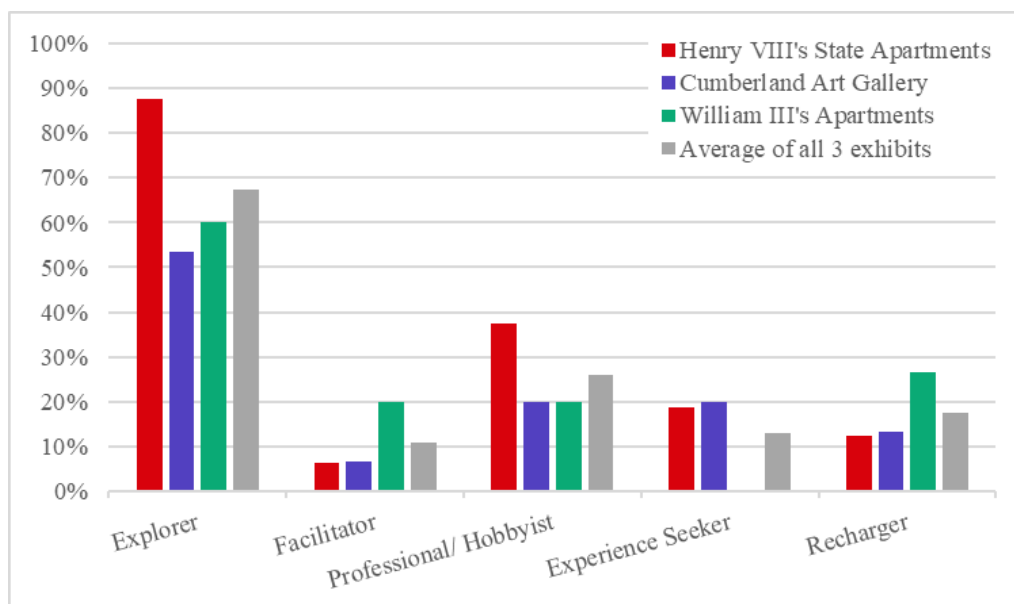
Figure III: Bar graph comparing the percentage of audience segmentation groups across the exhibits

Conclusions

Overall, the upcoming Wolsey Rooms should be akin to HSA; curated to tell the story of the historical figures with a focal point on the proper presentation of art to create an experience that draws the visitors in and provokes emotional engagement. To accomplish this, we have three recommendations for HRP and the Wolsey Rooms:

1. Use lighting and reduce reflections to highlight the art pieces.

2. Add detailed signage to elicit visitor curiosity.

3. Emphasize personal stories through choice of artwork, while keeping the historical atmosphere of the room.

To enhance the visitor experience, we suggest HRP prioritize the art in their exhibits by creating environments that cater to the artwork. This can be achieved through the use of lighting and signage that emphasizes the art as the focal point of the exhibit while the rest of the room immerses the visitor in the history of the palace. This will enable visitors to appreciate the artworks and feel like they have stepped back in time.

We also recommend that HRP curates the Wolsey Rooms with art that tells the personal stories of historical figures. Telling personal stories humanizes historical figures and often evokes emotional responses from visitors. Creating this emotional connection will make a more memorable experience for the visitors.

1. Introduction

In 2018-2019, roughly 72% of England's residents aged 16 and older said they visited a heritage or historic site within the past year (Department for Digital, Culture, Media and Sport, 2021). One classification of heritage sites is historic houses, which are former homes of historic figures that have been converted into museums and are open to visitors. Historic houses provide an opportunity for visitors from around the world to learn about the lives of their former occupants. These sites offer unique emotional and physical experiences for visitors and allow for personal connections to some of London's most famous people and events. When entering a historic house, a visitor can see how the owner lived and will often imagine their own life within that house (Mårdh, 2015). Historic houses allow the people of London to "find their own identity" as a city and a nation (Pinna, 2001). Since heritage sites play such a large role in London's culture and identity, it is important to improve these sites and the visitor experience.

Historic Royal Palaces (HRP) is a charity organization that manages six unoccupied royal palaces in the UK. In 1989, HRP was established as an Executive Agency of the UK government and has since become an independent charity working with the UK Secretary of State. Currently, HRP oversees five unoccupied royal palaces in London and one in Northern Ireland that are open as heritage sites for visitors. HRP's palaces are advertised as a "space to stir and be stirred," offering an environment for visitors to admire the wonderful scenes of the royal palaces, while also giving an opportunity to learn more about the lives of figures in English history (*Official Site*, n.d.).

HRP has commissioned several self-evaluation studies to optimize the visitor experience for current and future exhibits. They recently investigated visitor engagement with Interactive Qualifying Projects (IQP) from Worcester Polytechnic Institute (WPI) students and the consulting firm Morris Hargraves McIntyre (MHM). From 2013 to 2015, MHM created multiple reports for HRP. The first report evaluated visitor engagement with art at Hampton Court Palace (HCP) and the second report assessed visitor responses to the new Cumberland Art Gallery (CAG). In preparation for the opening of the Wolsey Rooms at HCP in 2024, HRP commissioned another study to evaluate visitor engagement with art. To complete this investigation and provide a broader understanding of how visitors engage with art at HCP's

exhibits, our project explored art engagement as well as visitor segmentation at Henry VIII's State Apartments (HSA), the CAG, and William III's Apartments (WA).

This project assessed the interpretive techniques that engage visitors with art at HRP galleries at HCP. To achieve this, we interviewed the Head of Interpretation and Design, the HCP's Curator of Collections, and the Executive Producer to understand their expectations and intentions for visitor engagement. We also interviewed a team leader from the HCP Host team, whose team engages with visitors daily within the gallery spaces. These interviews helped us gather the staff's thoughts on visitor reactions to different types of displays and the interpretive techniques that they found were most successful in helping visitors interpret art. To supplement the staff point of view, we conducted visitor observations, surveys, and interviews to assess the interpretive techniques that best engage visitors and visitor segmentation groups. The results of our study provided recommendations on which interpretative techniques will best engage HRP's most common visitor segment with the upcoming Wolsey Rooms at HCP.

Throughout the rest of our report, we discuss the findings of our literature review, the methodology we used to collect and analyze visitor data, the findings from our study, and our recommendations for HRP moving forward. In our literature review we discuss London's heritage sector, historic houses, visitor segmentation, assessing visitor engagement, and visitor engagement techniques used at HRP. Afterwards, we discuss the methods we used to gain insight on the staff and visitor perspectives on art engagement. In our findings section, we summarize staff goals for visitor engagement and explain the trends we found from visitor data about visitor engagement with art. To conclude our report, we propose and elaborate upon our recommendations for the upcoming Wolsey Rooms at HCP.

2. Background

2.1 London's Heritage Sector

England is home to some of the most recognizable monuments in the world. From Stonehenge to Westminster Abbey, locals and tourists alike flock to these World Heritage Sites to experience their rich history (UNESCO a, n.d). The United Nations Educational, Scientific and Cultural Organization (UNSECO) defines heritage as "our legacy from the past, what we live with today, and what we pass on to future generations" (UNESCO b, n.d). The heritage sector of London–consisting of museums, buildings, archaeology, archives, and all other efforts to conserve history–is an integral part of the UK (Heritage sector, n.d.). The culture industry is worth $54 million in London alone (London heritage council, n.d.). From housing monarchs since the 1600s to present day and being home to Shakespeare's theater, the Globe, London has a rich history and culture, which has evolved into a lively heritage sector (National portrait gallery, n.d.).

London is also home to a unique category of museum, the historic house. Historic houses provide an in-depth experience of the daily life of historical figures through the exploration of their home and personal items, which often elicits a personal response from visitors (Mårdh, 2015). With previous owners being the primary source of inspiration, historic houses can contain a myriad of items ranging from art pieces to weaponry. While visitors expect to see new exhibits in other kinds of museums, historic houses must remain authentic to their owner (Pinna, 2001). Visitors at historic houses can empathize with the owner and imagine what their life was like (Mårdh, 2015). As a result, understanding the manner in which historic houses engage visitors is important when creating a historical exhibit to offer a unique perspective on the past and provide a memorable experience.

2.2 Visitor Engagement Techniques in Historic Houses

To provide a positive visitor experience, historic house and museum designers consider not only the pieces to be included in the exhibit, but also how the space is used, signage, and lighting. Nubani et al. (2018) determined that the visibility and accessibility of displays are factors that guide how visitors move through exhibits and how they decide which exhibits to visit. In addition to traditional factors that impact exhibit design, curators of historic houses and

other museums are actively seeking new interpretive techniques to captivate visitors and create meaningful experiences. These innovative approaches can include scenography, live interpretation and performances, and targeted events to elicit physical and emotional engagement with the displays to create an immersive and memorable experience for the visitor.

Scenography, defined as the "discipline of narrative spaces and spatial choreographies" is a physical technique that historic house curators use to invite the visitor into the story and history of the house (Mårdh, 2015). Innovative scenography can take on many forms, such as creating a replica item or redesigning areas to tell the owner's story in a new way. Creating replicas of objects gives visitors something to interact with and adds a physical layer of connection to the relationship between the visitor and the historic house (Mårdh, 2015). Some research has been conducted to explore the relationship between historic houses and emotion. As seen in Hoare's (2020) report, "heritage sites enable emotive forms of storytelling." When looking at two different visitor routes at a heritage site in Wales, Hoare saw "it could be suggested that the familiarity of employment enables visitors a greater sense of connection with the maid narrative." Visitors tend to create their own emotional response to historic sites and often make a stronger connection with stories they are more familiar with. Visitors might be able to relate more with a maid and her employment than to a lady of the house. As a result, historic houses can tell stories of more relatable historical figures to evoke a stronger emotional response from the visitor.

Live interpretation is another technique that enhances a visitor's experience. It involves a team of costumed actors impersonating historical figures that are related to the site. These performers interact informally with visitors and perform various shows and activities (Ciolfi, 2012). The use of live actors in historic sites is effective at providing an interactive and immersive experience for visitors. By interacting with visitors as a historical figure, actors can provide a more personalized experience that can enhance the educational value of the museum visit and make it memorable.

Engagement can be increased when museums actively recruit visitors into activities, allowing museum staff to more directly affect a visitor's experience (Pattison & Shagott, 2015). Museums have implemented events aimed at specific demographics to further engage their visitors. One example of a targeted event is late-night events for Generation Y (those born

between 1980–1995) visitors, as they tend to enjoy staying up for these events (Barron & Leask, 2017). Alternatively, Generation Z visitors tend to look for experiences that they could photograph and share online (Hester et al., 2022). Events and exhibits targeting a specific audience can be an effective way to draw in new visitors and enhance certain experiences. However, it can be difficult to draw in a new demographic to the permanent exhibits without alienating the current or other audiences (Barron & Leask, 2017).

Creating exhibits with a variety of engagement techniques is important to engaging each visitor. Pine and Gilmore (1998) explain that experiences are personal and only exist "in the mind of an individual." In that sense, historic houses must give the visitor some kind of intangible experience to take with them, creating a lasting impact. One part of this experience is signage, as it allows visitors to "establish contact with works of art" (Eisner & Dobbs, 1988). Without signs and other aids art often remains "an enigma, a code they cannot crack without assistance," which hinders the visitor's ability to create a personal experience. One interpretive technique that visitors often use when viewing art is text. Regardless of the nature of the text (signage displayed on the wall, or outside information from a class or the internet), "visitors show a strong personal preference regarding the use of texts" (Jeanneret et al., 2010). As such it is important that historic sites provide signage so visitors can easily create their own experiences and create a connection with the artwork and location.

2.3 Visitor Segmentation and Motivations

Museums have conducted studies to determine if visitor demographics can help understand visitor motivation. In England, these studies have found that museum and art gallery visitors tend to have higher levels of education and income and are more likely to come from middle to higher socioeconomic backgrounds (Department for Digital, Culture, Media & Sport, 2020). However, demographics alone do not provide insight into how visitors engage with or benefit from their museum experiences (Adams, 2012). As Falk (2009) notes, "Museum-going is far too complex to be understood only on the basis of easily measured variables such as demographics." Thus, studying visitor segmentation can help gain a deeper understanding of their visitors and meet their individual needs and interests in order to enhance their visitors' experience and increase engagement.

By focusing on visitors' needs and interests, museums can create more meaningful experiences. Falk's (2009) visitor identity model proposes that visitors' identities help us understand their motivations for visiting museums and their engagement with museum experiences (see Table 1). Falk's model categorizes five visitor identities: explorer, facilitator, professional/hobbyist, experience seeker, and recharger. By understanding the different visitor identities and motivations, museums can tailor the exhibit design to improve visitor engagement. For example, if a museum attracts mostly professionals/hobbyists, the museum should provide detailed information displays to further educate visitors on the content of an exhibit. Alternatively, if a museum's primary audience is rechargers, museums may want to design an exhibit that allows visitors to immerse themselves in a peaceful environment.

Visitor Identity Type	Description
Explorer	Visitors who are curiosity-driven with a generic interest in the content of the museum. They expect to find something that will grab their attention and fuel their learning.
Facilitator	Visitors who are socially motivated. Their visit is focused on primarily enabling the experience and learning of others in their accompanying social group.
Professional/Hobbyist	Visitors who feel a close tie between the museum content and their professional or hobbyist passions. Their visits are typically motivated by a desire to satisfy a specific content-related objective.
Experience seeker	Visitors who are motivated to visit because they perceive the museum as an important destination. Their satisfaction primarily derives from the mere fact of having "been there and done that."
Recharger	Visitors who are primarily seeking to have a contemplative, spiritual and/or restorative experience. They see the museum as a refuge from the work-a-day world or as a confirmation of their religious beliefs.

Table 1: A description of each visitor identity and the activities that are most appealing to them (Cotter, 2022)

2.4 Assessing Visitor Engagement

Many factors influence visitor engagement, including visitor's motivations, age, group makeup, and culture. Taheri et al.'s (2014) study found that a visitor's prior knowledge of the exhibit fuels their visit and positively influences their engagement. The study also showed that visitors with "recreational motivations" were often more engaged with the exhibits. Age can affect a person's length of engagement, as young children generally have shorter attention spans (Braswell, 2012). However, this can vary greatly from exhibit to exhibit, as some activities appeal to certain age groups better than others. The makeup of a visitor group is also relevant, as the ratio of children to adults affects engagement time (Braswell, 2012). People tend to visit museums and historical sites with others and the group makeup can affect how visitors spend their time. It is important to consider how to engage more than one person within an activity, so that the entire group can be involved at once. A visitor's cultural background is another key factor in engagement, as people with different backgrounds will view the museum experience differently (Taheri et al., 2014).

Measuring visitor engagement at museums has presented challenges with obtaining data. While many museums would define engagement by the amount of time spent within the building, this metric has limitations (Taheri et al., 2014). It fails to show if visitors learned or thought about their experiences in the museum at all, or if they would return to the exhibit. For example, visitors within art museums may engage by identifying the dramatic elements within displays (Du Toit & Dye, 2008), which wouldn't be gauged just by tracking time spent at an exhibit. Instead, engagement can be seen more as interaction with the exhibits, although this is harder to quantify. Many studies use a combination of tracking visitors, surveys, or interviews to understand the full scope of a visitor's experience (Barron & Leask, 2017; Fan & Luo, 2022; Taheri et al., 2014). These methods ask visitors questions to gauge things like repeat visits, number of interactions with exhibits, and if guests tried to analyze the pieces. This type of data more broadly captures the entire picture of visitor engagement.

2.5 Visitor Engagement at Historic Royal Palaces

Historic Royal Palaces (HRP) is an independent charity responsible for managing six royal palaces that are no longer used by the British Royal family: Tower of London, Hampton Court Palaces, Banqueting House, Kensington Palace, Kew Palaces, and Hillsborough Castle

(*Official Site*, n.d.). HRP was established as an Executive Agency of Government in 1989 to care for the five locations owned by the British monarchy. In 1998, HRP became an independent charity through a Royal Charter, and they now hold a contract with the Secretary of State to maintain these five palaces. In 2014, the government of Northern Ireland contracted HRP to manage Hillsborough Castle.

HRP's goal is to create a "space to stir and be stirred" (*Official Site*, n.d.). To consistently achieve their mission, HRP has a history of developing engaging new exhibits and programs, such as their Sensory Palaces program and Beast Quest exhibit. HRP has also repeatedly evaluated their locations and exhibits to improve the visitor experience (Historic Royal Palaces Annual Review, 2019; Innes et al., 2018).

HRP has implemented numerous creative interpretive techniques to engage visitors and create a lasting and meaningful experience. One such experience is the "Enchanted Palace" exhibit at Kensington Palace. From 2010-2012, while Kensington Palace was undergoing refurbishment, its curators worked with a multidisciplinary theater and visual arts company to create a unique sensory experience for visitors (Falmouth University, n.d.). The "Enchanted Palace" told the stories of seven princesses who lived in Kensington Palace using "tall trees growing inside the walls; disembodied voices; surprising light and sound installations; and storytellers from Wildworks acting group" (Battersby, 2010). This unique exhibit created connections between the displays and the visitors by incorporating techniques that simultaneously engaged multiple senses.

HRP also launched a unique multimedia interactive tour named "The Lost Palaces" that offered visitors an opportunity to immerse themselves in the past at a heritage site that no longer exists, as it burned to the ground over 300 years ago. The tour took visitors to the exact locations where historical events of Whitehall Palace occurred and used bespoke handheld devices, binaural 3D sound, and haptic technology to allow visitors to touch, hear, and feel what it was like to be in the palace (Murphy, 2017).

In addition to developing creative and interactive exhibits, HRP conducts regular evaluations of their current exhibits to understand and improve visitor engagement techniques. This process is crucial when designing new exhibits. According to Tim Powell, digital producer at HRP, feedback from the unique "Lost Palaces" exhibit was extremely positive. Over 90% of

respondents either strongly agreed or agreed that the experience was unique compared to other visitor attractions, that the experience brought the history of the time and place to life, and that they felt more connected to the past after the experience (Calvium, n.d.). A 2018 study by WPI students evaluated the effectiveness of live performance as a tool to bring the past to life and enhance the educational experience for the visitors at the Tudor Kitchen exhibit at HCP. This study concluded that the presence of a live interpreter increases the dwell time at exhibits (Campolieta et al., 2018). These results emphasize the value of utilizing live interpretation methods to enhance visitor engagement to create a memorable and educational experience.

HRP has also conducted investigations to understand visitor segmentation at their sites. In one such investigation, HRP explored the family-friendliness of certain exhibits at Kensington Palace through a partnership with an IQP group, as well as working with the consulting firm MHM to understand visitor segmentation and visitor engagement with art. MHM analyzed visitor segmentation and engagement with art in HRP and in the CAG at HCP (2013; 2015).

The MHM report from 2013 gave HRP valuable insights about what visitors look for when visiting a historic palace. In the 2013 study, MHM first introduced visitor segmentations, and in the 2015 report, MHM created eight total segments (see Figure 1). They found that some visitors felt "very positive about having the opportunity to engage with artworks as part of their visit" to HCP and others believed they would be more willing to engage if "given the background knowledge and tools" to do so (MHM, 2013). The 2015 report was focused on the CAG and made conclusions about its audience and highlights, such as finding "repeat, older and domestic visitors [were] all overrepresented" and that the Canaletto room was very popular.

Enrichment

Mature, Traditional, Heritage, Nostalgia

Tend to be older adults with time to spare. Like spending their leisure time close to home. Established tastes: enjoy culture that links to beauty, history, nature, heritage and traditional artforms.

Entertainment

Consumers, Popularist, Leisure, Mainstream

Tend to be conventional, younger adults. The arts are on the periphery of their lives and compete against many other interests. Occasional forays into culture for spectacular, must-see experiences.

Stimulation

Active, Experimental, Discovery, Contemporary

Live their lives to the full, looking for new challenges and to break from the crowd. Open to a wide range of experiences, but like to be at the cutting edge.

Affirmation

Self-identity, Aspirational, Quality time, Improvement

Tend to be young adults, often studying or looking after family. The arts is one of many leisure choices. Adventurous: culture is a means of self-development.

Expression

Receptive, Confident, Community, Expressive

In-tune with their creative and spiritual side. Often artists, confident, fun-loving, self-aware people with a wide range of interests, from culture and learning, to community and nature.

Perspective

Settled, Self-sufficient, Focused, Contented

Fulfilled and home-orientated. Culture is a low priority. A spontaneous nature and appetite for discovery drive their engagement.

Release

Busy, Ambitious, Prioritising, Wistful

Tend to be younger adults with busy lives. Work and family commitments have squeezed out culture in recent years. They have limited time and resources to enjoy the arts but would like to do more.

Essence

Discerning, Spontaneous, Independent, Sophisticated

Tend to be well-educated professionals. Highly active cultural consumers and creators. Confident in their own tastes and pay little attention to what others think.

Figure 1: Brief description of the MHM segmentation groups (2015)

HRP has also supplemented their investigation into the visitor experience with art by enlisting other IQP teams from WPI. In 2019, a WPI IQP team evaluated the family-friendliness of two exhibits at Kensington Palace: "Victoria: A Royal Childhood" and "Victoria: Woman and Crown." This study concluded that HRP should make the signage clearer and larger, and that the immersive exhibits that encouraged direct interaction with objects enhanced the educational

experience. However, they noted that catering to the accessibility of one demographic, children in this case, can make the exhibit less engaging for all others (Cooley et al., 2019).

HRP is planning the reopening of the Wolsey Rooms in the historic interiors at HCP for 2024 and wants this exhibit to achieve their goal of stirring the imagination and engaging each visitor. As such, HRP has asked our team to investigate the current art exhibits, HSA, the CAG, and WA, at HCP and analyze how different art displays engage visitors in a meaningful, emotional, and intellectual manner to help inform the design of the Wolsey Rooms.

3. Methods

This project assessed the interpretive techniques that engage visitors with art at HRP's HCP to provide input for the design of the Wolsey Rooms scheduled to open in 2024. Specifically, we explored visitor engagement in three exhibits at HCP that each displayed art in a contrasting manner. HSA uses art as an aid to tell the story of King Henry VIII, but the art pieces are not the focus of the exhibit–storytelling is. One example of this is the historically inspired silk labels that provide a description of the artworks and tell the story of the king and his family. The CAG is a typical art gallery with focused spotlighting, modern art labels, and an emphasis on the art itself. Lastly, WA is a historic art gallery, "displayed the space as a moment in time," with few interpretive aids (B. Dolman, personal communication, June 8, 2023). To achieve our overall goal, we established two main objectives:

1. Understand HRP staff intentions and expectations for visitor engagement.

2. Assess interpretive techniques and visitor engagement with art at HCP.

We used a multi-method approach to achieve these objectives, which included semi-structured staff interviews along with visitor observations, surveys and interviews.

3.1 Objective 1: Understand HRP staff intentions and expectations for visitor engagement

We conducted semi-structured interviews with members of the HRP staff at HCP to learn their intentions behind the creation of each exhibit and understand what interpretive techniques they found to be the most significant or successful at engaging visitors. Specifically, we spoke with HCP's Aileen Peirce, Aurora Heimsath, Brett Dolman, and Eva Koch-Schulte. Peirce is the Head of Interpretations and Design and is responsible for interpretation at HSA and the CAG. Heimsath is the Leader of the Palace Host Team and is responsible for the operational staff that interact with visitors daily. Dolman is HCP's Curator of Collections and an expert in the field of art curating who selected the art pieces for HSA and the CAG. Koch-Schulte is the Executive Producer at HCP and was formerly the lead creative and interpretation specialist for the CAG and is considered the resident specialist at HCP in terms of public engagement and visitor engagement with art in historic spaces and galleries. We asked various questions relating to the

design and operation of the exhibits, how they envision that visitors engage with art, and other specific questions based on their respective positions (see Appendix A).

Our interview process consisted of 5 to 8 questions and lasted 30 to 60 minutes. Two team members met with the staff members, either in-person or virtually. One facilitated the interview–asking questions, conversing, and probing for information and opinions as needed– while the other took notes of the staff member's responses. We analyzed interview responses by applying an inductive coding approach to identify desired visitor engagement themes. With a more complete understanding of the practices used at HCP and the HRP staff's intentions, we could better utilize the visitor data we collected to assess if visitors are engaging with the exhibits as intended and make recommendations on which interpretive techniques to include in the new exhibit.

3.2 Objective 2: Assess visitor engagement with art at HCP

We explored how visitors engage with various interpretive techniques at HAS, the CAG, and WA galleries. We focused on understanding the emotional and behavioral responses to the exhibits, as well as identifying visitors' motivations, and their preferences for art displays. Our analysis consisted of a multi-method approach combining visitor observations, surveys, and semi-structured exit interviews with visitors at three HCP exhibits. Falk's (2009) visitor identity model was used to classify visitors into different segmentation groups based on their motivations and preferences when visiting HCP. The five visitor segmentation groups we evaluated were explorer, facilitator, professional/hobbyist, experience seeker, and recharger (see Table 1). Collecting and understanding this segmentation data enabled us to see which group is most prevalent in HCP's visitors. We can then propose interpretative techniques targeted towards the largest segmentation group. Based on our other quantitative data, we can make recommendations to HRP staff as to which current interpretive techniques are the most successful at engaging visitors to better inform their design of the Wolsey Rooms.

3.2.1 Observation of HRP Visitors

Our visitor observation protocol consisted of utilizing an offline form to gain insights into visitors' behavior, find which areas interested them, and study their interactions with displays. We used the offline digital form on our phones–as there was no way to reliably access the

internet within many exhibits–to note our observations while tracking visitor behavior (see Appendix B). Being able to fill out a form in this manner allowed us to watch the visitors and study their behavior more discreetly than if we were to have a laptop or use pen and paper.

We toured each exhibit to establish how to best conduct observations and where to position ourselves to be discreet while still being able to complete our observations. To achieve this goal, we divided the exhibits into 4 to 6 areas (see Figures 2-4). When conducting the observations, one team member was positioned in each area watching a single visitor at a time. We observed the first visitor who entered our area, and continued to watch that visitor until they left the area, adjusting our observation position as necessary. After our initial visitor left, we observed the next visitor that walked in and repeated the process. For each area, we collected 14 total observations, 7 in the morning and 7 in the afternoon. We observed 56 visitors in HSA, 56 in the CAG, and 84 in WA, totaling 196 observations across the three exhibits. The visitor was observed for a variety of potential factors that could measure their engagement, such as emotional reactions, if the exhibit evoked conversation, and what interpretive techniques they used as they made their way through the exhibit. We also noted demographic information, the group size and type, and if there were any external factors that may influence visitor behavior, including a large crowd or an event with costumed actors.
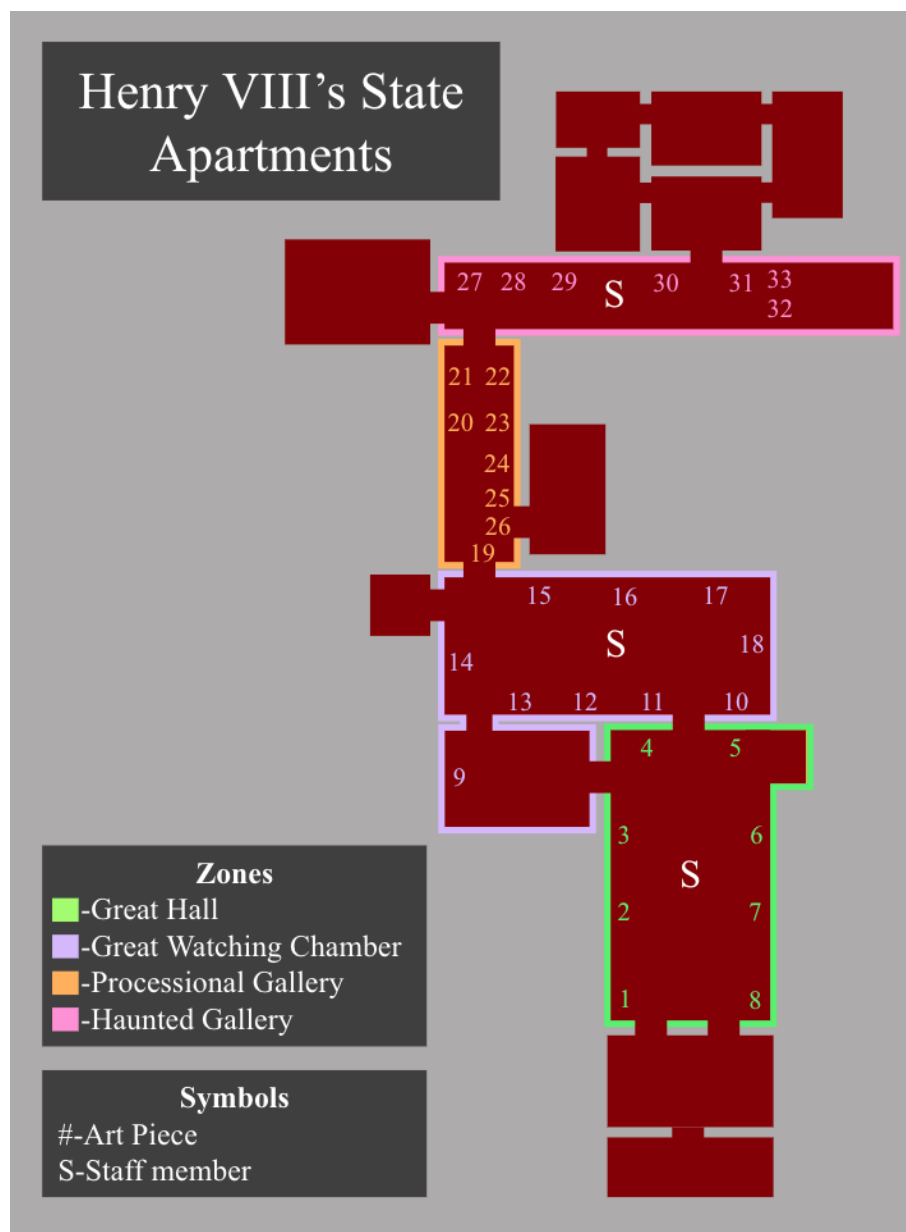
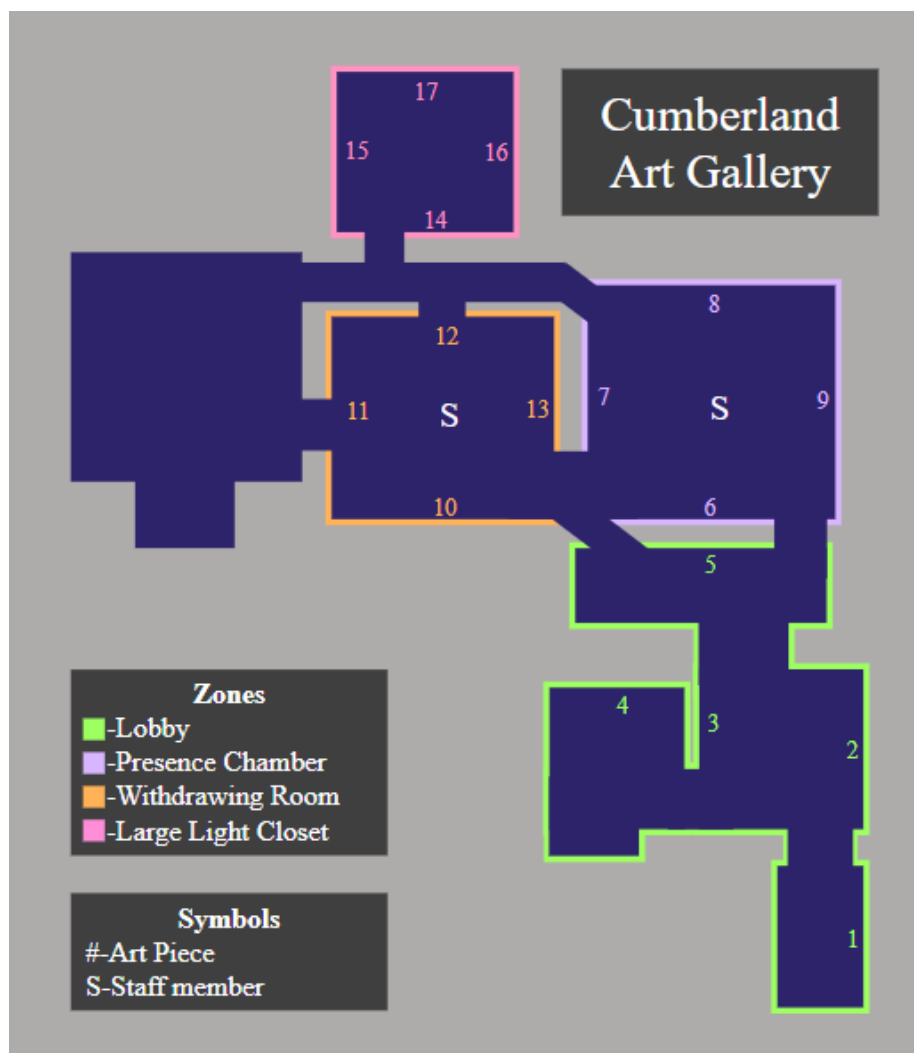**Figure 2: Map of Henry VIII's State Apartments observation areas**

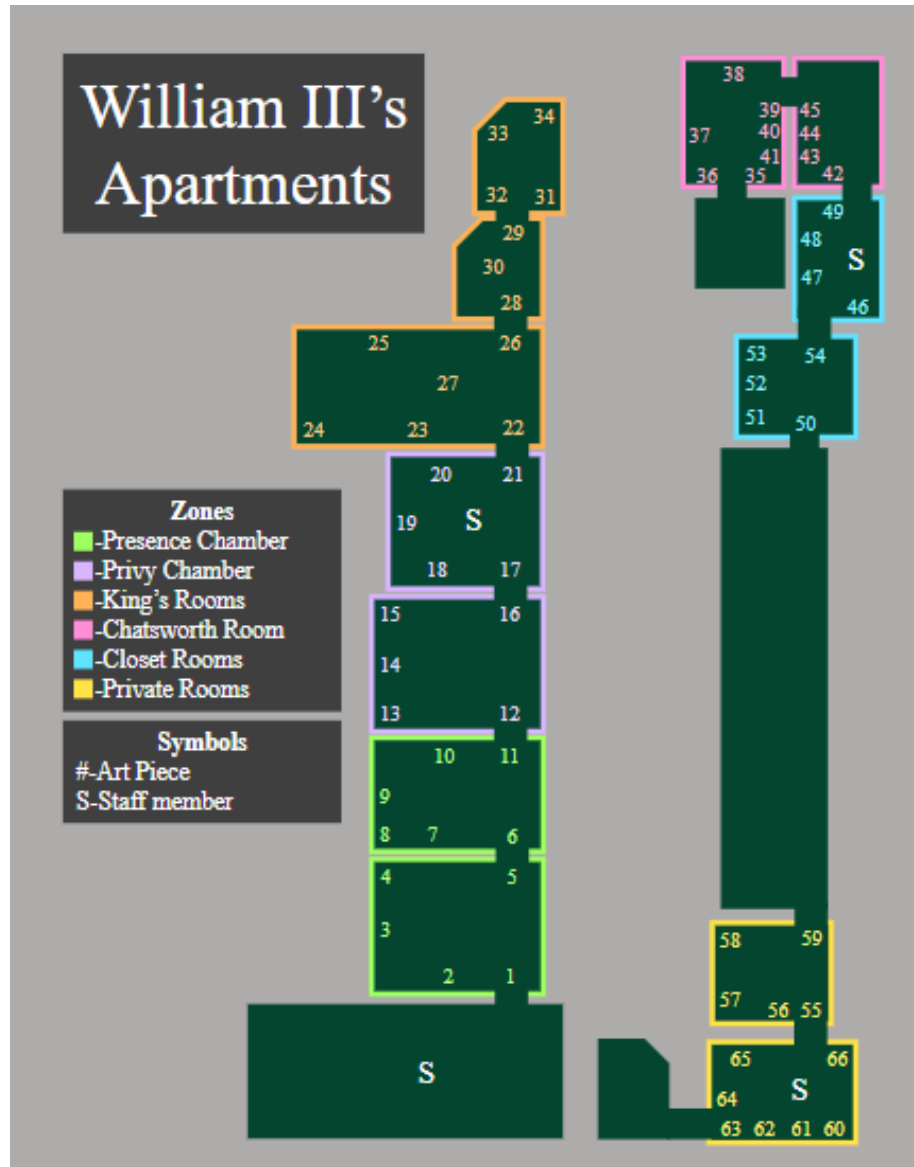**Figure 3: Map of Cumberland Art Gallery observation areas**

Figure 4: Map of William III's Apartments observation areas

3.2.2 Surveys of HCP Visitors

Our surveys consisted of a one-page form to collect data directly from the visitor's perspective to enhance the observation data collected by obtaining a more complete understanding of visitor motivations, their engagement with art, and their overall reaction to the exhibit. We surveyed 46 visitors (16 in HSA, 15 in the CAG, and 15 in WA). The questions were primarily multiple-choice, rate-the-following, and check-all-that-apply to gather data for quantitative analysis, as well as a few open-ended questions, to explore how visitors engaged with art, their motivation for visiting HCP, and the continuity of the exhibits' immersion (see

Appendix C). Asking about visitor motivation allowed us to classify visitors based on Falk's segmentation groups.

Our survey protocol targeted visitors who had completed their visit to the exhibit. In conducting our surveys, one of our team members stood near the exit of the exhibit with surveys and clipboards to ensure we were surveying visitors who had most likely seen the entire exhibit. When a visitor walked towards the exit, we would approach them with the paper survey and ask if they could spare five minutes to fill it out. We also kept copies of a paper consent form for the visitors that listed what the project is, how we would be using the data, contact information, and when we would dispose of any personal data collected as per the UK General Data Protection Regulation 2018 (see Appendix D).

3.2.3 Semi-Structured Interviews with HCP Visitors

We conducted semi-structured interviews to collect more qualitative and in-depth responses from visitors to gain a better understanding of visitor experience and their engagement with the exhibits. Our goal for the interviews was to have a conversation with the visitors about what art they found engaging, what part of the exhibit evoked emotions, and what they found to provoke deeper thought on history. As a result, we asked a question related to each of these respective topics:

A) Did you find any particular art display engaging or is there something that could be done to improve your engagement with art?

B) Was there any part of the exhibit that evoked any emotions?

C) Did any part of the exhibit make you consider history more deeply?

We designed an interview protocol to minimize disruption in the patrons' visit and elicit a thorough response. During the interview, we asked anywhere from one to three of our questions depending on how much time the visitor had. This interview format made the visitors more likely to speak with us. Once we had reached 12 responses to a question we rotated to the next question. The interviews were conducted upon the visitors' exit from the exhibit. We received 36-38 responses (12-13 for each question) at each of 3 exhibits, totaling 110 responses. As with the surveys, we also had the visitor consent forms available for visitors to take while conducting these interviews (see Appendix D).

3.2.4 Communications Gallery Case Study

To understand the importance of signage and visitor engagement in HCP, we conducted a day-long case study in the Communications Gallery, evaluating visitor engagement with the Windsor Beauties paintings. We had four separate time slots for data collection, two hours in the morning and two in the afternoon. The first hour in the morning displayed the paintings with just the frame displaying the artist and subject name. The following hour we added signs with descriptions providing more context on the pieces. We repeated this process in the afternoon. We used an interview style of data collection, asking the visitors a yes/no question, "When walking through the Windsor Beauties Hallway did you find yourself wanting more information on the pieces or history?" After 4 hours we had collected responses from 15 visitors when the signs were present (10 in the morning and 5 in the afternoon) and 15 when the visitors were not present (5 in the morning and 10 in the afternoon).

3.3 Limitations

When collecting data and visitor feedback for HRP, we encountered several challenges that affected our methods. A general limitation we faced when we conducted observation studies is the potential bias in interpreting what visitors are thinking. Since we don't know what exactly the visitors are experiencing, we had to rely on our ability to interpret visitors' behaviors and interactions with the exhibits. We also relied on estimating the visitor's demographic information based on their appearance, which could lead to incorrectly labeling some visitors. We are also aware that each team member has their own style of observing people, which could lead to variations in data collected and different interpretations.

In our survey, we experienced some interpretation errors due to lack of instructions. The final four multiple choice questions were dedicated to categorizing visitors into one of the Falk segments, but some visitors selected multiple answers for each question. This led to visitors falling into multiple segmentation groups, and the misrepresentation of the segmentation groups. We also had difficulty speaking with tours, field trips, and families as these groups were moving quickly through the exhibit. This may cause our survey data to be skewed as we were limited in who we could ask to complete the survey, which could cause our survey population to share a similar point of view.

One limitation we faced in our interviews was that visitors were sometimes unable to explain their thoughts in detail. Some visitors may come to conclusions about their experience quickly and explain those conclusions with insightful answers. However, some visitors took longer to formulate conclusions about their experience and were only able to give us brief answers immediately following their visit to the exhibit, which made it challenging to draw conclusions. As with the surveys, we had difficulty speaking with groups, which could cause our interviewees to share a similar point of view and skew our data.

We felt that our case study methodology was limited as it was conducted in a single day and only used interviews for data collection. As a result, we had a small sample size and our data came exclusively from visitor interviews. There was a noticeable difference in visitor behavior, but we were not able to include it in our reports as we did not conduct any formal observations. Conducting observations would have resulted in better quantitative analysis to support our interview data.

4. Findings

In this section, we first discuss our findings from the staff interviews, highlighting the two common themes of creating an experience that interests the visitor and evoking visitor emotion through the art. Then, we discuss the trends we found from analyzing the quantitative and qualitative data collected through visitor observations, surveys, and interviews for the three exhibits we evaluated. Overall, we categorized the data collected into five areas: staff expectation for visitor engagement, lighting, information displays, historical context and immersion, and connection to audience segmentation.

4.1 HRP Staff Intentions for Engagement in the Exhibits

HRP staff are committed to creating an optimal visitor experience, designing art exhibits that draw in visitors, and evoking an emotional response with the artworks and stories of historical figures. They want to create art galleries that speak to their visitors in surprising ways, encourage visitors to absorb the beauty of the spaces and the art around them, and tell the stories of the historical figures, all while maintaining the authenticity of the historic palace and the Royal Collection. Beyond creating a memorable experience, each staff member embraces HRP motto of creating spaces "to stir and be stirred" in order to design exhibits that elicit an emotional response (*Official Site*, n.d.). HRP staff wants visitor engagement to be twofold. They want visitors to feel a connection to history through the art and to have an emotional connection to the art that is uplifting and spiritual.

Throughout the staff interviews, two themes were prevalent—the staff want to create an experience that draws the visitors in, and they want their exhibits to provoke an emotional response from the visitors. Dolman's goal for visitors is to "be drawn to an artwork, to talk about it with family [or friends]." He commented that he "would like to have people be surprised into liking something which they didn't think they would like." He doesn't want visitors to walk "around the room clockwise" from one piece to the next "reading every single caption." Rather, he would like for something to catch a visitor's eye and draw them in. Heimsath recognizes that "visitors just want to make memories" when they visit and feels that focusing on storytelling rather than reciting facts is the best way to create a memorable experience for visitors. Koch-Schutle wants the visitors in the CAG to experience a traditional art gallery, while maintaining

the authenticity of the palace and the collection. She wants visitors to read the signage of the paintings that interest them as well the room folder "where the curatorial voice is stronger," but ideally, she wants the space to invite visitors to "sit down on one of the sofas if [they'd] like, spend quite a bit of time, and let the beauty sit in."

HRP staff strive to provide an uplifting experience that evokes emotion and provokes thinking about the past and how it affects us now. The staff's goal reflects the desire for a visitor's emotion and connection to an exhibit. Peirce's goal is for visitors to have an emotional engagement with the displays and to feel "connected to the past relative to their life." While she recognizes that not all art pieces and displays will engage all visitor types, she wants to unlock the stories of the former HCP occupants' lives so that visitors can feel a connection with history through art. Similarly, Dolman's goal for visitor engagement is to give visitors a "sort of spiritually, almost uplifting, emotional experience and contact with the past" and to "have their spirits lifted and stirred." He wants to create spaces where people have "more freedom of interaction" and where the art evokes conversation. Lastly, Heimsath focused on the practical side of how the operational staff "tries to engage visitors with art in an organic manner." She explained that the operational staff is trained to ask open-ended questions that elicit dialogue and an emotional response. After completing our staff interviews, we understood the staff's main goals for the exhibits: design exhibits that create an experience that draws the visitor in and provoke an emotional response.

4.2 Visitor Preferences for Interpretive Techniques and Engagement with Art

In this section, we summarize visitors' preferences and their overall experience going through the exhibits. We determined that visitors prefer well-lit rooms and an abundance of information displays. We also found that visitors experience more emotions when they connect to a personal story of a historical figure, and they felt more immersed when the historical atmosphere was prominent.

4.2.1 Lighting in the Exhibits

We found that visitors preferred better-lit rooms within the exhibit. In the HSA survey open-ended questions, 5 out of 16 visitors mentioned that certain rooms had low lighting. One

respondent noted that they could see the lighting posing difficulties for individuals with visual impairments.

In the CAG, an exhibit with a typical well-lit art gallery style, we found that no visitors mentioned lighting as an issue when viewing the art. The absence of any negative comments about lighting issues is noteworthy as our survey included extended response questions asking visitors to explain their ratings and state any issues they faced in the exhibit. In the survey, one person elaborated on their rating of the lighting, commenting that the lighting was "clear and not overpowering." When looking at the average rating of lighting versus the average of other aspects (information displays, layout of painting, etc.) visitors ranked in the surveys, there is a much larger difference between the average score of lighting and the average of the other aspects (see Figure 5). In HSA and WA, there was a 0.48 and 0.39 difference respectively. However, there was only a 0.15 difference in the CAG (see Figure 6). The lack of responses as well as the small difference in average scores leads us to believe that the lighting in the CAG was sufficient for visitors.
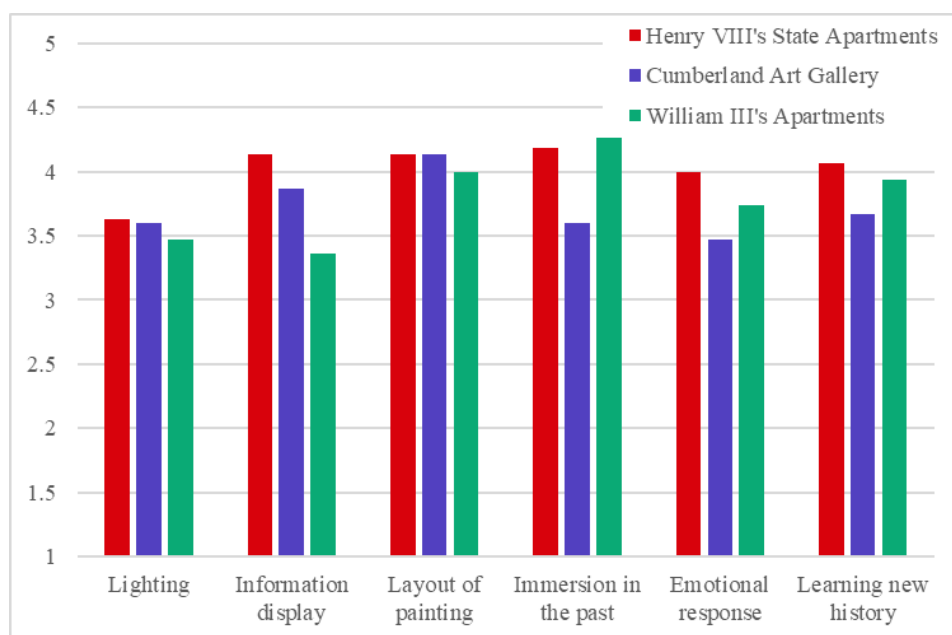

Figure 5: Bar graph comparing the average rating visitors gave to six aspects of the exhibits in the surveys (1 is bad and 5 is great)
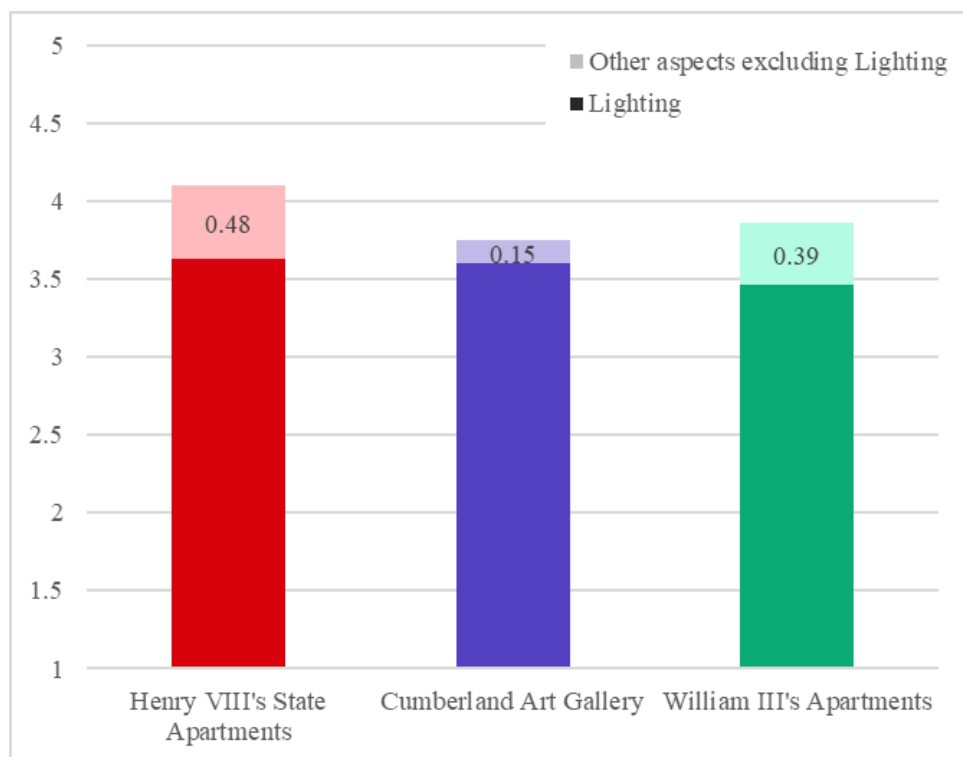
Figure 6: Difference between the lighting rating and the combined average of the other survey aspects from Figure 5 in all three exhibits

In WA, two common issues visitors faced were the lights reflecting off paintings and the dim lighting. The lighting in this exhibit received a relatively low average rating compared to other aspects (see Figure 6). Out of the 15 survey responses, 3 visitors cited reflections and light levels as issues that impacted their experience with the art displays.

4.2.2 Information Displays

Based on the feedback we received from surveys and interviews, visitors would benefit from additional information and context about the exhibits. When asked about the most engaging part of the exhibit in HSA, two interview respondents specifically mentioned wanting more information on how the tapestries were made and an explanation of the chapel ceiling. Another visitor commented that they are much more interested in what the art represents as opposed to the art itself, which suggests that visitors prefer more contextual information on the artwork. When asked the same question, another three respondents appreciated the informative elements present in HSA, such as the tablecloths in the Great Hall featuring rules and information, the availability of room guides, and the silk labels. The positive reception of the interpretive devices

suggests that clear and concise information enhances the visitor experience. Our observations also support this as we noticed many visitors in the Great Hall actively engaged with the information provided on the tablecloths and the signage at the entrance. From our observations, we found that 53% and 63% of visitors read any kind of text in HSA and in the CAG respectively. Both exhibits have ample signage as HSA is a storytelling-based exhibit meant to inform visitors on the Tudors and the CAG is a traditional art gallery focusing on presenting art well. These findings lead us to believe that visitors will often read signage when it is made available.

In WA, visitors wanted more information about the artwork and rooms. When asked about the most engaging part of the exhibit, 4 out of the 13 people interviewed stated that there was little description about the artwork. One survey respondent stated, "I feel like there could be more information on the walls or stands to explain each room." Another visitor wrote, "for those interested there's very little information about the artwork." Our observations revealed that only 33% of visitors found and read the signage in the exhibit (which are simple wooden plaques hidden on the windowsill) (see Figure 7).
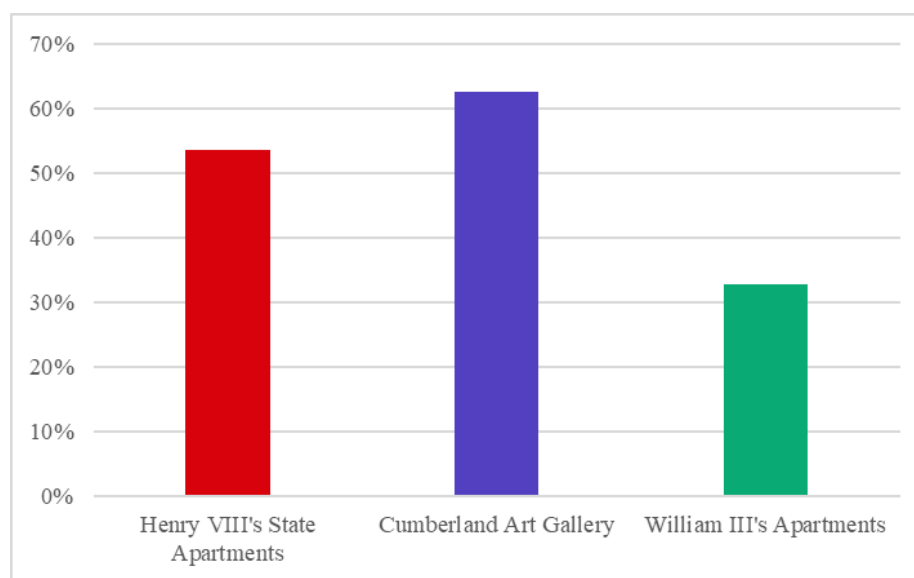

Figure 7: The average percentage of visitors who read informative displays across all exhibits from observations

Through our interviews with visitors regarding the Windsor Beauties collection in the Communications Gallery, we found when descriptive signs about the pieces were displayed

visitors became more interested in the art, wanting even more information about the paintings. Out of the 15 visitors interviewed when the signs were out, 10 indicated that they wanted more information on the paintings. Some visitors specified that they wanted to know why the women were in the paintings and their significance. This finding supports the observation from the Jeanneret et al. report, as "visitors show a strong personal preference regarding the use of texts" (2010). We found visitors engaged more with the signage and wanted more information once the signs were present. Without signs, visitors only saw the painting and a label with the name of the artist and the Windsor Beauty. The lack of signage did not elicit visitor curiosity, as 8 out of 15 respondents felt there was sufficient information when the signs were not present. This case study leads us to believe that visitors are more interested in learning about the artworks once more information is introduced, and that signage can be used as a tool to emphasize pieces and draw visitor attention.

4.2.3 Historical Context and Immersion

Visitors felt a strong connection with history in HSA and WA, but less so in the CAG. In HSA and WA, the historical setting of the palace and exhibits played a large role in engaging visitors. Across responses to all 3 interview questions, visitors to HSA emphasized the importance of being immersed in the past; 16 of all 36 responses (44%) mentioned history or being immersed in the past as factors that positively impacted their experience. Of the twelve visitors asked if any part of the exhibit made them consider history deeply, nine respondents agreed that it did. Three of those nine elaborated further specifying that being in the historical setting of the palace and HSA was a contributing factor in provoking historical thought. The importance of the palace setting is also seen in the visitor survey responses. When asked about the most engaging part of HSA, 7 of 16 of survey responses cited history or architecture (see Figure 8). Likewise, the setting is integral to the visitor experience in WA. When asked about the most engaging part of the exhibit, 3 of 12 visitors interviewed enjoyed the entirety of the exhibit and or went for the experience as opposed to a specific piece. Similarly, 5 out of 12 visitors cited being at the palace and WA as the factor that made them consider history more deeply. One visitor noted "you can watch and read, but it's another thing to come to see where it happened." This is also reflected in the survey's ranking question regarding immersion in the past, with HSA and WA having similar rankings (4.2 and 4.3 respectively), while the CAG is lower at 3.6 (see

Figure 5). Visitors valued the historical setting of HSA, WA, and the entire palace as the setting helps them better engage with history.
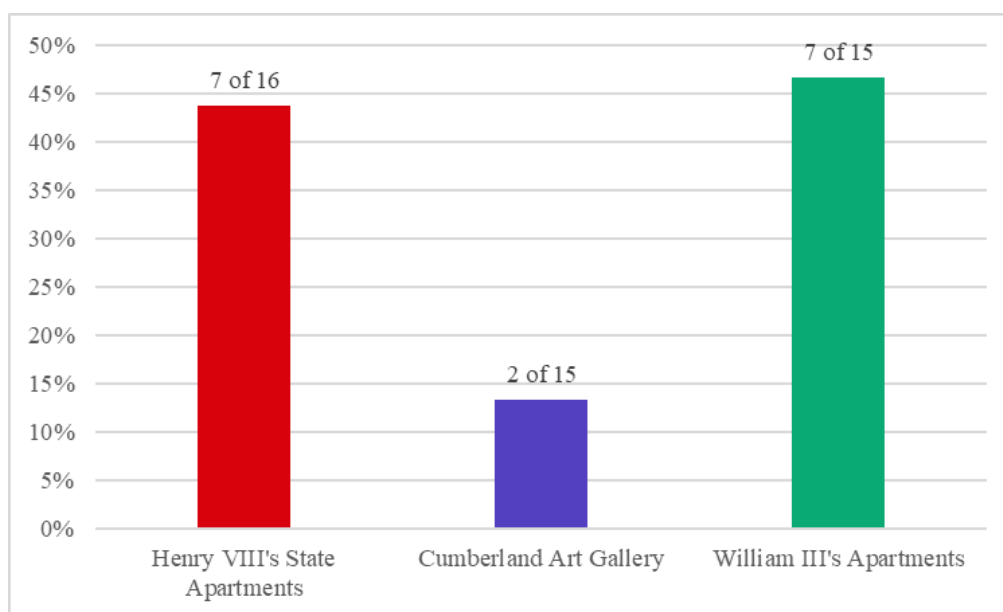

Figure 8: Survey responses that mentioned history or architecture

The visitor interview data from HSA and WA also suggest that people felt engaged when learning more about the personal stories of the kings and their families, which often evoked emotional connection to the art. When asked about the most engaging part of the exhibit, three of twelve respondents enjoyed the more personal aspects of the exhibit, including what the art represents, the description of each person in a painting, the lives of Henry VIII's wives, or wanting more information on the staff of the time. When asked about emotional responses, four of the twelve respondents mentioned Henry VIII's wives, the most prevalent topic amongst the history related answers. One visitor, who felt emotions evoked by the wives, also felt emotions about "walking through history" and another cited experiencing what was "more than beyond what was tangible" as evoking emotion. In WA, royalty was the most common answer amongst visitor interviews as it was mentioned in 7 of the 13 responses to the emotional response question. One of the respondents wondered what it must have been like to spend a winter night in one of the rooms, showing a personal connection to the owner of the palace and their story. Relating to the owner of the space is a distinct feature for visitors of historic houses. Similarly, one visitor imagined what the people's lives must have been like as they transitioned from room to room, rising in wealth and status, hoping to meet the king. Hearing the stories of the monarchs

in the rooms where the stories took place fosters emotions and reactions from visitors and connects them with the art, this history, and the exhibits.

Unlike HSA or WA where art is integrated into the historical setting, the CAG exposes visitors to art from the Royal Collection in a typical art gallery format. As a result, there was little connection between visitor engagement and history. In the visitor interviews, eight of the twelve visitors disagreed when asked if any part of the exhibit made them consider history more deeply. The remaining visitors that did consider history more deeply cited various reasons, such as seeing the history of "all of it" which could allude to the exhibit itself or the palace in its entirety. When asked about the most engaging part of the exhibit, none of the interviewees mentioned history. These results suggest that there is little overlap between the art gallery setup and historic nature of the palace within the CAG.

Throughout all three exhibits, the overall emotions visitors experienced were awe and wonder at the details, history, and collections. In HSA, 5 out of 12 interviewees expressed feelings of awe or described feeling impressed when asked about their emotional response. One interviewee explicitly mentioned being in awe, stating, "I can't imagine living like this." Likewise in the CAG, 5 of the 12 responses described the emotion they felt was awe or fascination. Of those responses, two visitors said they were awed specifically by the paintings of Venice. In WA, 2 of the 13 interviewees stated that they were impressed by the staircase. While the remaining interviewees did not explicitly express their emotions, 11 of the 13 agreed that the exhibit evoked some form of emotional response.

4.2.4 Audience Segmentation and Engagement

Our findings show the majority of HRP's audience can be categorized in the explorer segmentation group. Although visitors can fall into multiple segmentation groups (9 of 46 visitors), we found that a total of 31 out of 46 visitors (67%) across all three exhibits were explorers (see Figure 9). Similar to the MHM expression segmentation group (those who are creative with a variety of interests including culture and learning), explorers are curious and driven to find something that interests them within a museum and learn more about it. This curiosity was prevalent in their behavior of reading signage during their visits and their desire to have more information available. Explorers also expect something to draw their attention which was seen when they engaged with the stories of the monarchs' lives and the historical setting of

the exhibits and the palace. The characteristics of the explorer segmentation group closely mirror the staff goals to stir the soul, draw visitors in, and evoke connection with history through art.
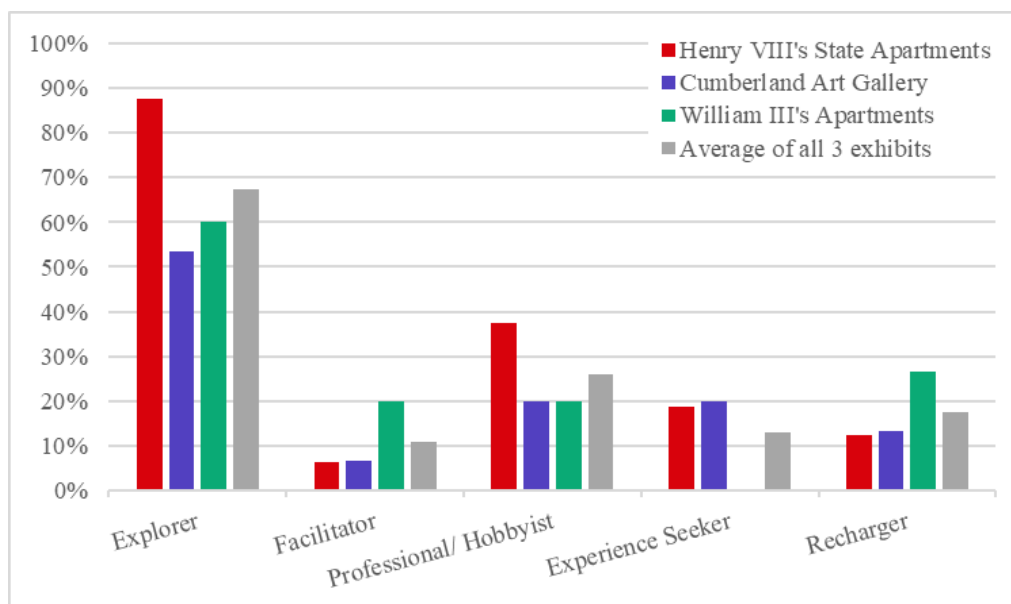

Figure 9: Bar graph comparing the percentage of audience segmentation groups across the exhibits

5. Conclusions

This project evaluated different interpretive techniques to determine which best elicited visitor engagement with art at HCP to provide input for the design of the Wolsey Rooms. Our findings show that good lighting, descriptive information displays, the historical setting, emphasizing the personal stories of historical figures, and creating exhibits to target the explorer segment are the key aspects of exhibits that engage visitors with the art. Survey and interview data showed that visitors preferred well-lit rooms within exhibits and would like to see more information displays to explain the art in the context of the exhibits. Our findings also showed that the setting and architecture of HCP is important to the visitor experience, which inspired wonder and awe. Visitors felt more emotionally engaged and connected when the personal stories of historical figures were incorporated into the art and exhibit design. Based on our surveys, we found that explorers–curious and learning focused visitors–make up the majority of HRP's audience.

To improve the current exhibits, we recommend that HRP modify their lighting in both the Haunted Gallery in HSA and throughout WA, as well as add more information displays about the art in WA and the Communications Gallery. Even though the focus of HSA is not the art, we recommend increasing lighting on the works of art or in the room in general to increase visitor engagement with art, while maintaining the historical atmosphere. In WA, we recommend that the lighting be adjusted to minimize reflections off the glass, especially on paintings which are darker and more subdued. We also recommend providing additional information about the art displayed in WA, which could be in the form of silk signs or room guides, as well as redisplaying the signs in the Communications Gallery.

For the upcoming Wolsey Rooms, we recommend that the exhibit is well lit and that there is plenty of information displayed or available about the art, including the historical context and personal stories of the art subjects. In the construction and layout of the Wolsey Rooms, we recommend that the lighting of the art be a key consideration to create an optimal visitor experience, similar to the CAG. The lighting can be either focused on the individual artworks or overall room lighting, whichever is deemed most authentic to the overall design of the exhibit but should be installed to minimize any reflections that take away from the visitor engagement with the artworks. As signage has been shown to draw visitors to art, we further recommend

installing sufficient signage in a manner that maintains the authenticity of the exhibit. If appropriate to the overall exhibit design, wall signage, whether in the form of plaques or silk signs with clear and large text, would draw the attention of visitors to key paintings. A room guide would be an effective tool to provide more details about all the paintings included in the Wolsey Rooms for visitors seeking additional information. To achieve the goal of stirring the spirit and creating emotional connections with the past, we recommend incorporating the personal stories of painting subjects or related historical figures throughout the exhibit. As such, we recommend a design that maintains a historically accurate representation, like HSA, or a historic art exhibit like WA, rather than a more modern art gallery atmosphere like the CAG. Visitors come to HRP to experience where history took place, as such keeping the historic atmosphere of the exhibit in mind is crucial. Designing the Wolsey Rooms to incorporate storytelling into the art while capitalizing on the setting and beauty of HCP will most effectively connect visitors to the past and evoke an emotional response.

To augment the research we have completed, we recommend that additional case studies be completed that include both observational and interview data. Since we were only able to complete interviews for our case study in the Communications Gallery, we lacked quantitative data. Thus, we recommend collecting observational data from the Communications Gallery to provide the missing quantitative data from our case study. We also suggest case studies that investigate the impact of the different interpretative techniques that our study found to be most impactful on visitor engagement: lighting, room guides, and storytelling. Further investigation into lighting in the Haunted Gallery and WA can determine which lighting technique has the most significant impact on visitor engagement. Additional studies in WA and Communications Gallery can evaluate how to most effectively display room guides; for example, placed at the entrance, placed near a prominent painting, or distributed by staff. Finally, in one or more of the exhibits, we recommend comparing the effects of audio tours that incorporate different techniques on visitor engagement. We propose comparing the current audio tour, one that provides more in-depth information about the artwork, and one that incorporates this information through storytelling. These studies can provide additional insights into how these techniques can be utilized to improve the visitor experience and engagement with art.

To generate engagement and excitement about the Wolsey Rooms, we recommend that HRP targets explorers–their largest audience segmentation group. Explorers are generally

curious and engage with things that draw their attention. Including personal stories and interesting facts in the information displays will also satisfy the explorers' curiosity, while giving them unique knowledge to draw back to after their visit.

Through HSA, the CAG, and WA, HRP successfully created a place for visitors to "stir and be stirred" at HCP. We recommend that HRP builds on their success by emphasizing the historic atmosphere of the exhibit, targeting the explorer segment, incorporating lighting to highlight the art, including signage that fits the theme of the room, and telling personal stories of historic figures through the artwork in the upcoming Wolsey Rooms.

6. References

Adams, M. (2012). Museum Evaluation: Where have we been? What has changed? And where do we need to go next? *Journal of Museum Education, 37*(2), 25–35. https://doi.org/10.1080/10598650.2012.11510728

Barron, & Leask, A. (2017). Visitor engagement at museums: Generation Y and "Lates" events at the National Museum of Scotland. *Museum Management and Curatorship* (1990), *32*(5), 473–490. https://doi.org/10.1080/09647775.2017.1367259

Battersby, M. Enchanted Palace: A tale of seven princesses. (2010, March 26). *The Independent*. https://www.independent.co.uk/arts-entertainment/art/features/enchanted-palace-a-tale-of-seven-princesses-1928374.html

Braswell, G. (2012). Variations in children's and adults' engagement with museum artifacts. *Visitor Studies*, *15*(2), 123–135. https://doi.org/10.1080/10645578.2012.714997

Calvium (n.d.). *Giving life to the lost palace of Whitehall.* https://calvium.com/projects/the-lost-palace/

Campolieta, K., Galvan, A., Johnson, R., & Wu, C. (2018). Tudor kitchen evaluation. Digital WPI. https://web.wpi.edu/Pubs/E-project/Available/E-project-062018-102003/unrestricted/HRP_Team-Final_Report.pdf

Ciolfi, L., & McLoughlin, M. (2012, October). Designing for meaningful visitor engagement at a living history museum. *Proceedings of the 7th Nordic conference on human-computer interaction: Making sense through design* (p. 69-78). https://doi.org/10.1145/2399016.2399028

Cooley, W. R., Lund, P. E., Lu, Y., & Ta, T. Q. N. (2019). Evaluating effectiveness, engagement, and family-friendliness at Kensington Palace. Interactive Qualifying Project, Worcester Polytechnic Institute. https://digital.wpi.edu/concern/student_works/gb19f822f?locale=en

Cotter, K. N., Fekete, A., & Silvia, P. J. (2022). Why do people visit art museums? Examining visitor motivations and visit outcomes. *Empirical Studies of the Arts*, *40*(2), 275–295. https://doi.org/10.1177/02762374211011740

Department for Digital, Culture, Media & Sport. (2020). Museums - Taking part survey 2019/20. https://www.gov.uk/government/statistics/taking-part-201920-museums/museums-taking-part-survey-201920

Department for Digital, Culture, Media and Sport. (2021). Visits to heritage sites. Ethnicity facts and figures. https://www.ethnicity-facts-figures.service.gov.uk/culture-and-community/culture-and-heritage/adults-visiting-heritage-sites/latest

Du Toit, & Dye, B. (2008). Empathic dramatic engagement as a metaphor for learning in the art museum. *Visitor Studies*, *11*(1), 73–89. https://doi.org/10.1080/10645570801938483

Eisner, E. W., & M. Dobbs, S. (1988). Silent pedagogy: How museums help visitors experience exhibitions. Art Education, 41(4), 6-15.

Falk, J. H. (2009). Identity and the museum visitor experience (1st ed.). Routledge. https://doi.org/10.4324/9781315427058

Falmouth University, (n.d.). The enchanted palace: Developing audiences and bringing history to life with a site-specific co-created installation. REF Case study search. https://impact.ref.ac.uk/casestudies/CaseStudy.aspx?Id=44644

Fan, & Luo, J. M. (2022). Impact of generativity on museum visitors' engagement, experience, and psychological well-being. *Tourism Management Perspectives*, *42*, 100958. https://doi.org/10.1016/j.tmp.2022.100958

Hester, Geegan, S., & Parker, K. A. (2022). Learning "through the Prism of Art": Engaging Gen Z Students with University Art Museums. *The International Journal of Learning in Higher Education*, *29*(1), 185–197. https://doi.org/10.18848/2327-7955/CGP/v29i01/185-197

Historic Royal Palaces (2019). *Historic Royal Palaces Annual Review 18/19*. https://www.hrp.org.uk/media/2510/annual-review-2018-19.pdf

Historic Royal Palaces. (n.d.). *Official Site*. https://www.hrp.org.uk/

Hoare, J. (2020). The practice and potential of heritage emotion research: an experimental
    mixed-methods approach to investigating affect and emotion in a historic house.
    International Journal of Heritage Studies, 26(10), 955-974.

Innes, A., Scholar, H., & Sharma, M. (2018). Evaluation of the Sensory Palaces Project.
    https://www.hrp.org.uk/media/2109/sensory-palaces-prgramme-evaluation-full-report-
    2018.pdf

Jeanneret, Y., Depoux, A., Luckerhoff, J., Vitalbo, V., & Jacobi, D. (2010). Written signage and
    reading practices of the public in a major fine arts museum. Museum Management and
    Curatorship, 25(1), 53-67.

London heritage council. (n.d.). *London Heritage Council.* https://www.londonheritage.ca

Mårdh, H. (2015). Re-entering the house: scenographic and artistic interventions and interactions
    in the historic house museum. *Nordisk Museologi*, (1), 25-39.

Morris Hargreaves McIntyre. (2013). *A window into history: a formative evaluation of art at the
    palace, Hampton Court*.

Morris Hargreaves McIntyre. (2015). *Treated to art in the Cumberland: A summative report on
    the Cumberland Art Gallery at Hampton Court Palace*.

Murphy, A. (2017, August 1). *The lost palace II – return of historic royal palaces' VR sensation.*
    Museums + Heritage Advisor. https://advisor.museumsandheritage.com/features/lost-
    palace-ii-return-historic-royal-palaces-vr-sensation/

National portrait gallery. (n.d.). https://www.npg.org.uk/collections/explore/kings-and-queens-a-
    family-tree

Nubani, Puryear, A., & Kellom, K. (2018). Measuring the effect of visual exposure and saliency
    of museum exhibits on visitors' level of contact and engagement. *Behavioral Sciences*,
    8(11), 100–. https://doi.org/10.3390/bs8110100

Pattison, S. A., & Shagott, T. (2015). Participant reactivity in museum research: The effect of cueing visitors at an interactive exhibit. *Visitor Studies*, *18*(2), 214–232. https://doi.org/10.1080/10645578.2015.1079103

Pinna, G. (2001). Introduction to historic house museums. *Museum International*, *53*(2), 4-9.

Pine, B. J., & Gilmore, J. H. (1998). Welcome to the experience economy (Vol. 76, No. 4, pp. 97-105). Harvard Business Review Press.

Taheri, Jafari, A., & O'Gorman, K. (2014). Keeping your audience: Presenting a visitor engagement scale. *Tourism Management*, *42*, 321–329. https://doi.org/10.1016/j.tourman.2013.12.011

UNESCO, a. (n.d.). United Kingdom of Great Britain and Northern Ireland—UNESCO world heritage convention. UNESCO World Heritage Centre. https://whc.unesco.org/en/statesparties/gb

UNESCO, b. (n.d.). World heritage. UNESCO World Heritage Centre. https://whc.unesco.org/en/about/

University of Birmingham. (n.d.). Heritage sector. https://intranet.birmingham.ac.uk/as/employability/careers/resources/cal/heritage.aspx

Appendix A: Historic Royal Palace Staff Interview Questions

Questions for Aileen Peirce, Head of Interpretation and Design:
1. Tell us a bit about your position and your role with Henry VIII's State Apartments and Cumberland Art Gallery.
2. Tell us about the design of Henry VIII's State Apartments and the Cumberland Art Gallery and how the design is meant to engage visitors.
3. Do you design displays with specific visitors in mind? If so, what groups do you target?
4. What is the emotion, as well as message, you want the visitors to take away, and how do you plan on accomplishing this?
5. We are going to be looking at different interpretive techniques that help the visitor engage with and understand art at these exhibits. Are there any specific interpretive techniques you find the most successful at aiding visitors interpret the art?

Questions for Aurora Heimsath, Leader of Palace Host team:
1. Tell us a bit about your position and your role with Henry VIII's State Apartments, the Cumberland Art Gallery, and William III's Apartment.
2. In your opinion, how do the exhibits engage visitors with art?
3. How often do visitors speak with the operational staff in the exhibit about the displays?
4. Do you have any recommendations for how to determine visitors' reactions through observations?
5. We are going to be looking at different interpretive techniques that help the visitor engage with and understand art at these exhibits. Are there any specific interpretive techniques you find the most successful at aiding visitors interpret the art?

Questions for Brett Dolman, Curator of Collections:
1. Tell us a bit about what you do as curator.
2. Could you describe each of the exhibits in your own words? Style, structure, historical meaning, etc?
3. Could you expand upon your role/curating with Henry VII's State Apartments, Cumberland Art Gallery, and William III's Apartment?
4. Tell us your goals for visitors and how the artwork you selected reflects that.
5. What kinds of visitors are you targeting with the display? Is there any prior knowledge needed to understand an exhibit's meaning/properly interpret it?
6. How do you envision visitors walking through an exhibit?
7. We are going to be looking at different interpretive techniques that help the visitor engage with and understand art at these exhibits. Are there any specific interpretive techniques you find the most successful at aiding visitors interpret the art?
8. Tell us a bit about your involvement/plan for the upcoming Wolsey Rooms?

Questions for Eva Koch-Schutle, Executive Producer

1. Tell us a bit about what you did as the former lead creative and interpretation specialist for Cumberland Art Gallery.
2. We are evaluating Henry VIII's State Apartments, Cumberland Art Gallery, and William III's Apartments.
   a. Could you describe Cumberland Art Gallery in your own words? Style, structure, historical meaning, etc?
3. Could you expand upon your involvement in the creation of the Cumberland Art Gallery and William III's Apartment *trial room*?
4. Tell us your goals for visitors and how what you've done with the Cumberland Art Gallery reflects that?
5. What kinds of visitors are you targeting with the display? Is there any prior knowledge needed to understand an exhibit's meaning/properly interpret it?
6. How do you envision visitors walking through an exhibit?
7. We are going to be looking at different interpretive techniques that help the visitor engage with and understand art at these exhibits. Are there any specific interpretive techniques you find the most successful at aiding visitors interpret the art?
8. Tell us a bit about your involvement/plan for the upcoming Wolsey Rooms?

Appendix B: Visitor Observation Forms

All:

Who is doing this observation?*

( ) Emilia   ( ) Joseph

( ) Juliet   ( ) Moet

Date of Observation*

| ##/##/#### |

Time of day*

( ) Morning   ( ) Afternoon

Henry VIII's State Apartments Question:

Which room are you observing?*

( ) Great Hall   ( ) Great Watching Chamber

( ) Processional Gallery   ( ) Haunted Gallery

Cumberland Art Gallery Question:

Which room are you observing?*

( ) Lobby   ( ) Presence Chamber

( ) Withdrawing Room   ( ) Large Light Closet

William III's Apartments Question:

Which room are you observing?*

- ( ) Presence Chamber
- ( ) King's Rooms
- ( ) Closet Rooms
- ( ) Privy Chamber
- ( ) Chatsworth Room
- ( ) Private Rooms

All:

How many people are in the room?*

- ( ) 0-10
- ( ) 31-40
- ( ) 11-20
- ( ) 41-50
- ( ) 21-30
- ( ) 50+

Event going on (Shakespeare show, movie playing, etc.)* ⬤ No

Group size*

```
0
```

Group type*

- ( ) School group
- ( ) Alone
- ( ) Other
- ( ) Friend group
- ( ) Couple
- ( ) Family
- ( ) Tour

Gender*

- ( ) Male
- ( ) Female
- ( ) Unknown

What age range would you put them in?*

( ) <12   ( ) 12-16   ( ) 17-24

( ) 25-44   ( ) 45-59   ( ) 60+

Which of the following do the visitors use/do?

- [ ] Speak with Operational Staff
- [ ] Speak within a group
- [ ] Take a photo
- [ ] Laugh
- [ ] Gesture towards any display (painting, ceiling, sign, etc.)
- [ ] Ask Questions
- [ ] Audio guides
- [ ] Reading any kind of text (plaque, sign, poster, title, etc.)
- [ ] Other

Visitor behavior in a room

- [ ] Wander
- [ ] Sat down at any point
- [ ] Glanced at displays
- [ ] Stopped at displays
- [ ] Entered side rooms
- [ ] Other

What are the emotional reactions to the display?*

- [ ] Scared
- [ ] Happy
- [ ] Curious
- [ ] Excited
- [ ] Focused
- [ ] Confused
- [ ] Suprised
- [ ] Interested
- [ ] Not interested
- [ ] Other

Which pieces did they pause to look at (more than a glance)?*

- [ ] 1 - Lobby
- [ ] 2
- [ ] 3
- [ ] 4
- [ ] 5
- [ ] 6 - Presence Chamber
- [ ] 7
- [ ] 8
- [ ] 9
- [ ] 10 - Withdrawing Room
- [ ] 11
- [ ] 12
- [ ] 13
- [ ] 14 - Large Light Closet
- [ ] 15
- [ ] 16
- [ ] 17
- [ ] Other non-art displays (crown room, ceiling, etc.)
- [ ] None

Henry VIII's State Apartments Question:

Which pieces did they pause to look at (more than a glance)?*

☐ 1 - Great Hall	☐ 2	☐ 3
☐ 4	☐ 5	☐ 6
☐ 7	☐ 8	☐ 9 - Great Watching Chamber
☐ 10	☐ 11	☐ 12
☐ 13	☐ 14	☐ 15
☐ 16	☐ 17	☐ 18
☐ 19 - Processional Chamber	☐ 20	☐ 21
☐ 22	☐ 23	☐ 24
☐ 25	☐ 26	☐ 27 - Haunted Gallery
☐ 28	☐ 29	☐ 30
☐ 31	☐ 32	☐ 33
☐ Other non-art displays (crown room, ceiling, etc.)	☐ None	

Cumberland Art Gallery Question:

What are the emotional reactions to the display?*

- [ ] Scared
- [ ] Happy
- [ ] Curious
- [ ] Excited
- [ ] Focused
- [ ] Confused
- [ ] Suprised
- [ ] Interested
- [ ] Not interested
- [ ] Other

Which pieces did they pause to look at (more than a glance)?*

- [ ] 1 - Lobby
- [ ] 2
- [ ] 3
- [ ] 4
- [ ] 5
- [ ] 6 - Presence Chamber
- [ ] 7
- [ ] 8
- [ ] 9
- [ ] 10 - Withdrawing Room
- [ ] 11
- [ ] 12
- [ ] 13
- [ ] 14 - Large Light Closet
- [ ] 15
- [ ] 16
- [ ] 17
- [ ] Other non-art displays (crown room, ceiling, etc.)
- [ ] None

William III's Apartments Question:

Which pieces did they pause to look at (more than a glance)?*

1 - Presence Chamber	2	3
4	5	6
7	8	9
10	11	12 - Privy Chamber
13	14	15
16	17	18
19	20	21
22 - King's Rooms	23	24
25	26	27
28	29	30
31	32	33
34	35 - Chatsworth Room	36
37	38	39
40	41	42
43	44	45
46 - Closet Rooms	47	48
49	50	51
52	53	54
55 - Private Rooms	56	57
58	59	60
61	62	63
64	65	66
Other non-art displays (crown room, ceiling, etc.)	None	

All:

Duration of Observation (in minutes)*

Where and how did they spend their time? (please describe)*

Note any comments overheard.

Additional Notes

Appendix C: Visitor Engagement Survey

1. How did you engage with the art displays? (Check all that apply)

☐ Audio guide
☐ Discussion with peers
☐ Stop to look at it
☐ Reading art signage/labels
☐ Participated in tour
☐ Staff explanation/discussion
☐ Personal reflection/introspection
☐ Picture taking
☐ Other _____

2. Thinking about your experience at the art exhibits, rate the following. (Circle your choice)

Lighting	Bad Poor Ok Good Great
Info. displays	Bad Poor Ok Good Great
Layout of Paintings	Bad Poor Ok Good Great

Why? _____
_____

3. How important are art displays to feeling like you've stepped back in time? (Circle your choice)

The art displays immersed you in the past.	Strongly-disagree Disagree Neither Agree Strongly-agree
The art displays elicited some emotion or empathetic response.	Strongly-disagree Disagree Neither Agree Strongly-agree
You learned something new about history.	Strongly-disagree Disagree Neither Agree Strongly-agree

Why? _____
_____

4. Were there any issues you faced that impacted your experience with the art displays?
_____
_____

5. What was the most engaging part of this exhibit? And why?
_____
_____

6. What was your primary reason for visiting Hampton Court Palace today?
○ To see everything I can and learn as much as possible.
○ To share experience/information with family or friends.
○ To see famous works of art and objects or to seek out new experiences.
○ To further pre-existing knowledge.
○ To relax.

7. How would you describe your path throughout Hampton Court Palace?
○ Look for things that interest me and gravitate toward those things.
○ Find things I can share with my family or friends that would interest them.
○ Try to see everything I can, scanning galleries and labels for important information.
○ Look for specific pieces or displays.
○ Sit down and spend my time experiencing the galleries and objects.

8. How do you react to a crowded museum?
○ Ignore the crowds and continue to explore.
○ Make sure everyone in my group stays together.
○ Join in on the fun! I want to be where the crowds are.
○ Come back another time when it is less crowded.
○ Retreat to a less crowded area.

9. How do you feel after you leave the museum?
○ I have learned something new.
○ My family or friends learned something new and had a shared experience.
○ I have experienced something unique and want to pursue more experiences.
○ I want to keep learning about the subject — through books, lectures, etc.
○ Relaxed and ready to take on the week.

Appendix D: Visitor Consent Form

We are part of a student-led project team from Worcester Polytechnic Institute. We are working with Historic Royal Palaces in order to learn more about how visitors engage with the exhibits at Hampton Court Palace.

This survey/interview is entirely voluntary and will take around 5 minutes of your time. You may choose not to answer the questions and can end the survey at any time. Your name will not be recorded.

Thank you for your willingness to complete this survey!

Any personal data you choose to share with us will be stored securely and disposed of June 30th, 2023, in line with the UK General Data Protection Regulation 2018.

WPI and Historic Royal Palaces will produce research reports and other outputs using the data we collect from our interview. All data will be reported anonymously. If you have any queries about the survey, please contact gr-lon_e23_hrpwpi.edu@wpi.edu, jdavis4@wpi.edu, or jdavis5@wpi.edu.

If you have any questions about how Historic Royal Palaces uses data, please see Historic Royal Palaces Privacy Policy https://www.hrp.org.uk/privacy-notice/#gs.wea852 or email info@hrp.org.uk.

Appendix E: Authorship

Section	Primary Author(s)	Editors
Abstract	Moet O'Donnell	Emilia Krum
Executive Summary	Moet O'Donnell, Joseph Saladino	Moet O'Donnell, Joseph Saladino
1: Introduction	Joseph Saladino	Emilia Krum
2: Background		
2.1: London's Heritage Sector	Joseph Saladino	Emilia Krum, Moet O'Donnell
2.2: Visitor Engagement Techniques in Historic Houses	Joseph Saladino	Emilia Krum, Moet O'Donnell, Joseph Saladino
2.3: Visitor Segmentation and Motivations	Moet O'Donnell	Emilia Krum, Moet O'Donnell, Joseph Saladino
2.4: Assessing Visitor Engagement	Juliet Morin	Emilia Krum, Juliet Morin, Moet O'Donnell, Joseph Saladino
2.5: Visitor Engagement at Historic Royal Palaces	Emilia Krum	Moet O'Donnell, Joseph Saladino
3: Methods		
3.1: Objective 1: Understand HRP staff intentions and expectations for visitor engagement	Joseph Saladino	Emilia Krum, Moet O'Donnell
3.2: Objective 2: Assess visitor engagement with art at HCP	Emilia Krum	Emilia Krum, Moet O'Donnell
3.2.1: Observation of HRP Visitors	Juliet Morin	Emilia Krum, Juliet Morin, Moet O'Donnell, Joseph Saladino
3.2.2: Surveys of HCP Visitors	Moet O'Donnell	Emilia Krum, Moet O'Donnell

3.2.3: Semi-Structured Exit Interview with HRP Visitors	Emilia Krum	Emilia Krum, Moet O'Donnell, Joseph Saladino
3.3: Limitations	Emilia Krum, Juliet Morin, Moet O'Donnell, Joseph Saladino	Emilia Krum, Moet O'Donnell
4: Findings		
4.1: HRP Staff Intentions for Engagement in the Exhibits	Emilia Krum	Emilia Krum, Juliet Morin, Moet O'Donnell, Joseph Saladino
4.2: Visitor Preferences for Interpretive Techniques and Engagement with Art	Emilia Krum, Moet O'Donnell	Emilia Krum, Juliet Morin, Moet O'Donnell, Joseph Saladino
4.2.1: Lighting in the Exhibits	Moet O'Donnell	Emilia Krum, Juliet Morin, Moet O'Donnell, Joseph Saladino
4.2.2: Information Displays	Moet O'Donnell	Emilia Krum, Juliet Morin, Moet O'Donnell, Joseph Saladino
4.2.3: Historical Context and Immersion	Joseph Saladino	Emilia Krum, Juliet Morin, Moet O'Donnell, Joseph Saladino
4.2.4 Audience Segmentation and Engagement	Emilia Krum	Emilia Krum, Juliet Morin, Moet O'Donnell, Joseph Saladino
5: Conclusions	Emilia Krum	Emilia Krum, Juliet Morin, Moet O'Donnell, Joseph Saladino