



**Evaluating Effectiveness, Engagement, and Family-Friendliness at  
Kensington Palace**

**An Interactive Qualifying Project Report  
Submitted to the Faculty of WORCESTER POLYTECHNIC INSTITUTE  
In partial fulfilment of the requirements for the  
Degree of Bachelor of Science by:**

William Cooley  
Yingbing Lu  
Philip Lund  
Tiffany Ta

21 June 2019

Report Submitted to:  
Professor Joel Brattin, Worcester Polytechnic Institute  
Professor Seth Tuler, Worcester Polytechnic Institute  
Emma Morioka, Historic Royal Palaces



**Historic  
Royal Palaces**

*This report represents the work of WPI undergraduate students submitted to the faculty as evidence of a degree requirement. WPI routinely publishes these reports on its website without editorial or peer review. For more information about the projects program at WPI, see <http://www.wpi.edu/Academics/Projects>*

## **Abstract**

Historic Royal Palaces, a charity that manages six royal palaces, opened two new exhibits, *Victoria: A Royal Childhood* and *Victoria: Woman and Crown*, at Kensington Palace to celebrate the 200th anniversary of Queen Victoria's birth. Our team sought to evaluate the effectiveness, engagement, and family-friendliness of these exhibits in order to improve the visitor experience. To achieve this goal, we conducted interviews with the exhibition managers to determine their goals and expectations for the exhibits, then designed and utilized a survey and observation guide to gather visitor responses. We used the 370 survey responses and 65 observational samples we collected to compare the exhibits to previous exhibits and provide recommendations on improving signage and navigational clarity.

## Executive Summary

A country's history helps its residents and visitors understand its present state and appreciate its culture and greatness. To prevent loss of this knowledge, the heritage industry, a group of businesses and charities comprised primarily of museums and historic sites, has taken on the responsibility of preserving and presenting history. However, studies have shown that some visitors struggle to develop an emotional connection with history-related attractions. Visitors want to feel immersed and interact with an exhibit so they can more easily create a connection with the information presented (Norris & Tisdale, 2017).

London is renowned for its historic sites, especially those related to the monarchy. VisitBritain research shows that over 60% of overseas visitors who come to Britain are likely to seek out places associated with the monarchy (2014). Historic Royal Palaces (HRP) maintains six royal palaces in the United Kingdom. HRP has commemorated the 200<sup>th</sup> anniversary of Queen Victoria's birth by creating new exhibits to encourage visitor engagement in May 2019. The first exhibit, *Victoria: A Royal Childhood*, is a family-friendly exhibit that HRP hopes will attract more family visitors to Kensington Palace. The second exhibit is *Victoria: Woman and Crown*, which covers Queen Victoria's later life and legacy, examining her roles as mother, wife, grandmother, monarch, and widow. HRP staff sought third-party evaluations of these exhibits to gain an outside perspective and to help staff address any issues or shortcomings with the Queen Victoria exhibits they may not have otherwise noticed.

The goal of the project was to evaluate the effectiveness, engagement, and family-friendliness of the new *Victoria: A Royal Childhood* and *Victoria: Woman and Crown* exhibits at Kensington Palace in order to improve the visitor experience. To accomplish this goal, we first identified common practices and standards for interaction and family-friendliness at other museums and historic sites, noting how their exhibits' standards compare to best practices. Second, we determined HRP's motivations for opening the Queen Victoria exhibits and the organization's anticipated visitor takeaways from them. Third, we analyzed who visits Kensington Palace and why, how individuals and families interact with the exhibits, and how these new exhibits compare to HRP's past exhibits.

To understand commonly used methods of exhibit design, we visited exhibits at prominent HRP and non-HRP sites, using Google Forms to record our observations. These observations served as a basis for comparison when evaluating the Queen Victoria exhibits at Kensington Palace. We then interviewed two HRP exhibition managers and the Director of Interpretation to understand their motivations, goals, and expectations for the new exhibits. These interviews explored the reasoning behind the exhibit designs, characteristics intended to make the exhibit family-friendly, and the designers' plans to engage visitors.

In order to assess the engagement, effectiveness, and family-friendliness of the exhibits at Kensington Palace, we designed a survey and observation guide. We selected questions to address specific measures mentioned in the HRP evaluation plan: reach, quality, value, and impact. Appendices A-D contain the survey and observation questions we used to make our assessment.

Our analysis focused on four key areas relating to visitors: demographics, opinions, learning, and behaviors. Our survey sample size was 370 visitor groups, while our observation sample size was 35 in *Victoria: A Royal Childhood* and 30 in *Victoria: Woman and Crown*. There are some limitations to our analysis as families tended to have insufficient time to take our survey, and we focused our observations only on families to compensate for this lack of family-related data. We list some of our key findings below.

### Demographics

- Most visitors who responded to the survey lived in the United States and the United Kingdom and had never visited before, similar to previous years, although there was a slight increase in proportion of domestic visitors compared to Summer 2018.
- Visitors valued different aspects of culture than previous years.

### Opinions

- In general, visitors felt like they were getting good value for money.
- The time visitors spent in the exhibits was at the lower end of the expected range.
- Many visitors raised concerns about sign legibility and crowding.

### Learning

- Scores measuring visitor learning were generally higher than or similar to previous years, with one exception possibly relating to flawed methodology.
- Many people mentioned basic messages, but few mentioned complex ones.

### Behaviors

- Families tended to enjoy multisensory elements but also tended to miss some of them.
- A majority of visitors watched available videos.
- Adults often guided their children through the exhibits.

From the above analysis, we have identified several recommendations for HRP to help improve Kensington Palace in the short- and long-term. We recognize that some changes we propose may be difficult to implement in a short period of time.

- **We recommend HRP make signage larger and clearer.** Findings 9 and 12 indicated that signage in the exhibits was an issue. Addressing this would improve visitor experience.
- **We recommend HRP focus on accessibility to their core audience in the future.** HRP made some design decisions in an effort to improve the experience for children. However, based on findings 2, 3, and 14, some of these decisions negatively affected adult visitors, and children tend not to make up a large proportion of Kensington Palace visitors.
- **We recommend HRP continue focusing on immersive exhibits.** We noted in finding 10 that Discovery scores were higher for the new exhibits than for the palace in 2018. We also noted that the new exhibits show several of the common interpretation methods used by other museums. Thus, we recommend HRP continue creating exhibits similar to *Victoria: A Royal Childhood* and *Victoria: Woman and Crown*.

## **Acknowledgements**

We would like to express our thanks to Historic Royal Palaces for providing us with the opportunity to work on this project. We'd specifically like to thank Emma Morioka, our project liaison, for her support through the term. Furthermore, we'd like to thank Aileen Peirce, Carol Swords, and Caterina Berni for taking time out of their busy schedules to speak to us, and all the members of the Kensington Palace staff for their help throughout the project. Finally, we'd like to thank Joel Brattin and Seth Tuler, our advisors, for their help and support, as well as Dominic Golding, our site director, and Melissa Butler, our ID2050 instructor.

## Table of Contents

Abstract .....	i
Executive Summary .....	ii
Acknowledgements .....	iv
List of Figures .....	vii
List of Tables .....	viii
Authorship .....	ix
Chapter #1: Introduction .....	1
Chapter #2: Background .....	3
2.1 The Relationship between HRP, Kensington Palace, and Queen Victoria .....	3
2.2 Creating Effective Exhibits .....	5
2.3 Summary .....	10
Chapter #3: Methods .....	11
3.1 Objective 1: Identify common practices and standards for interaction and family-friendliness at other sites and note how they differ from best practices. ....	11
3.2 Objective 2: Determine HRP's motivations for opening these exhibits and its anticipated visitor takeaways from them .....	11
3.3 Objective 3: Analyze who visits HRP's exhibits and why, how individuals and families interact with the exhibits, and how well exhibits meet HRP expectations.....	13
Chapter #4: Results and Analysis .....	14
4.1 Who Visits Kensington Palace? .....	14
4.2 How Did People Feel About Their Visit? .....	19
4.3 What Did People Learn From Their Visit? .....	20
4.4 Visitor Behavior in the Exhibits .....	22
4.5 Exhibit Observations .....	24
Chapter #5: Recommendations .....	25
5.1 We recommend HRP make signage larger and clearer. ....	25
5.2 We recommend HRP focus on accessibility to their core audience in the future... ..	25
5.3 We recommend HRP continue focusing on immersive exhibits. ....	25
Chapter #6: Conclusion .....	26
References .....	27
Appendices .....	29
Appendix A: Survey .....	29
Appendix B: Museum Observation Form .....	30
Appendix C: Exhibit Observation Form .....	33

Appendix D: <i>Victoria: A Royal Childhood</i> and <i>Victoria: Woman and Crown</i> Observation Form .....	37
Appendix E: Staff Interview Questions .....	38
Appendix F: The Learning Journey .....	39

## List of Figures

Figure 1: Kensington Palace .....	3
Figure 2: Family Feud Room in <i>Victoria: A Royal Childhood</i> .....	4
Figure 3: <i>In Sorrow Shut</i> art installation in <i>Victoria: Woman and Crown</i> .....	5
Figure 4: World map detailing visitor countries of origin .....	15
Figure 5: Percentages of visitor group sizes .....	16
Figure 6: Ages of children that visited the Victoria exhibits and took the survey.....	17
Figure 7: Percentages of returning visitors vs. first-time visitors .....	18
Figure 8: Percentages of visitors belonging to each culture segment.....	18
Figure 9: Pie chart showing percentages for visitors who interact with the toy box in <i>Victoria: A Royal Childhood</i> .....	22
Figure 10: Pie chart showing percentages of visitors that tried on costumes or watched the puppet theater performance in <i>Victoria: A Royal Childhood</i> .....	23



## List of Tables

Table 1: HRP's Ten Guiding Principles for Family-Friendly Route Interpretation .....	7
Table 2: A description of each culture segment, the types of people that tend to identify with each segment, and the activities that each segment most enjoys.....	9
Table 3: Concepts measured in the visitor exit survey .....	12
Table 4: Average visitor scores for overall experience and family-friendliness score in current Victoria exhibits compared to the previous year's average.....	19
Table 5: Average visitor scores for Learning Journey quality scores in current Victoria exhibits compared to the previous year's average .....	20
Table 6: Frequency of keywords mentioned in the visitor survey for <i>Victoria: A Royal Childhood</i> .....	21
Table 7: Frequency of keywords mentioned in the visitor survey for <i>Victoria: Woman and Crown</i> .....	21

## Authorship

Section	Primary Author(s)	Editors
1	Tiffany Ta	All Members
2	All Members	All Members
2.1	Tiffany Ta	All Members
2.1.1	Yingbing Lu	All Members
2.1.2	Yingbing Lu	All Members
2.2	Tiffany Ta	All Members
2.2.1	Tiffany Ta, Philip Lund	All Members
2.2.2	Tiffany Ta	All Members
2.2.3	Tiffany Ta, Philip Lund	All Members
2.2.4	Tiffany Ta	All Members
2.2.5	Tiffany Ta, Philip Lund	All Members
2.3	Tiffany Ta	All Members
3	William Cooley	All Members
3.1	William Cooley, Tiffany Ta	All Members
3.2	William Cooley, Yingbing Lu, Philip Lund	All Members
3.3	William Cooley	All Members
3.3.1	William Cooley, Philip Lund	All Members
3.3.2	William Cooley, Tiffany Ta	All Members
4	William Cooley	All Members
4.1	William Cooley	All Members
4.1.1	William Cooley, Yingbing Lu	All Members
4.1.2	William Cooley, Yingbing Lu	All Members
4.1.3	William Cooley, Yingbing Lu	All Members

4.1.4	William Cooley, Yingbing Lu	All Members
4.1.5	William Cooley, Yingbing Lu	All Members
4.2	Tiffany Ta	All Members
4.2.1	William Cooley	All Members
4.2.2	William Cooley	All Members
4.2.3	William Cooley	All Members
4.2.4	William Cooley	All Members
4.3	Tiffany Ta	All Members
4.3.1	William Cooley	All Members
4.3.2	William Cooley	All Members
4.4	Yingbing Lu	All Members
4.4.1	William Cooley, Yingbing Lu	All Members
4.4.2	William Cooley, Philip Lund	All Members
4.4.3	Tiffany Ta, William Cooley	All Members
4.5	William Cooley	All Members
5	William Cooley	All Members
5.1	William Cooley	All Members
5.2	William Cooley	All Members
5.3	William Cooley	All Members
6	Yingbing Lu, Tiffany Ta	All Members

## Chapter #1: Introduction

A country's history helps its visitors understand its present state and appreciate its culture and greatness. Losing knowledge of this history essentially erases the legacy and heritage of a nation. To prevent this loss of knowledge, the heritage industry, a group of businesses and charities comprised primarily of museums and historic sites, has taken on the responsibility of preserving and presenting this history, using storytelling to help visitors immerse themselves. In addition to the industry's long tradition of acting as a supplementary educational institution, it has also served as an entertainment source for individuals and families (Haywood & Cairns, 2006). Thus, the industry aims to ensure its work is both informative and entertaining for visitors.

However, studies have shown that some visitors struggle to develop an emotional connection with history-related attractions, such as historic sites or museums. Visitors want to feel immersed and interact with an exhibit so they can more easily create a connection with the information presented (Norris & Tisdale, 2017). Without an emotional connection, visitors may become disconnected with exhibit contents and retain less information, making it more difficult for museums to achieve their educational goals. To combat this lack of emotional connection, many "traditional" museums, mostly comprised of glass case exhibits with little opportunity for interaction, have begun to create more interactive experiences that increase visitor engagement and the amount of information that the visitors remember (Villa, 2006).

London is renowned for its numerous museums and historic sites, such as the British Museum, the Tower of London, and the Victoria & Albert Museum, many of which examine and exhibit items related to the history of the empire and the monarchy. The city attracts many visitors with its unique royal history: VisitBritain research shows that over 60% of overseas visitors who come to Britain are likely to seek out places associated with the monarchy (2014). Many domestic visitors also revere and identify with the monarchy, as it still plays a ceremonial role in the country's government. Members of the royal family have lived, and still do to this day, in several royal palaces in London that showcase the country's finest craftsmanship and artistry and are now significant historic sites.

Historic Royal Palaces (HRP), which maintains six royal palaces in the United Kingdom, seeks to create interactive exhibits that stimulate sight, touch, and hearing while portraying the history of the British royal family (Historic Royal Palaces, 2019). The organization has worked, both independently and with third-party organizations, to improve family-friendliness in exhibits at some of their locations, such as the Tower of London and Hampton Court Palace. HRP has commemorated the 200<sup>th</sup> anniversary of Queen Victoria's birth by creating new exhibits to encourage visitor engagement in May 2019. HRP staff seeks third-party evaluations of these exhibits to determine visitor demographics and opinions on the exhibits. By gaining an outside perspective on the exhibits, the staff can then address any issues or shortcomings they may not have noticed otherwise.

The goal of the project was to evaluate the effectiveness, engagement, and family-friendliness of the new *Victoria: A Royal Childhood* and *Victoria: Woman and Crown* exhibits at Kensington Palace in order to improve the visitor experience. To accomplish this goal, we first identified common practices and standards for interaction and family-friendliness at other sites and noted how they compare to best practices. Second, we determined HRP's motivations for opening these exhibits and the organization's anticipated visitor takeaways from them. Third, we analyzed who visits Kensington Palace and why, how individuals and families interact with the exhibits, and how these new exhibits compare to HRP's past exhibits.

From the exit surveys we gave out to visitors and the observations we performed in the Queen Victoria exhibits, we found that visitor reception was largely positive. Generally, visitor demographics, dwell times, and ratings met HRP's expectations and remained similar to previous years. Visitor learning scores for the Victoria exhibits increased in some areas compared to general scores for Kensington Palace in the past. However, many visitors mentioned having issues with locating and reading signage. Based on these findings, we identified areas of improvement for both present and future exhibits.

## Chapter #2: Background

In this chapter, we first present an overview of Kensington Palace, as well as its history, to examine why HRP is creating the *Victoria: A Royal Childhood* and *Victoria: Woman and Crown* exhibits to give important context to their goals for audience takeaways. We then determine the relevance of heritage sites and their important educational role. Finally, in order to assist HRP in creating a family-friendly exhibit, we identify how museums create exhibits that appeal to families.

### 2.1 The Relationship between HRP, Kensington Palace, and Queen Victoria

Countries form their identities based on their associations with important figures, institutions, and historical sites. Locations that focus on preserving the memories of these figures and sites, otherwise known as heritage sites, play a key part in preserving and maintaining this national identity. Generally, the goal of the organizations managing these sites is often to preserve the country's history, tell the site's story, and help visitors understand the values and beliefs that people held in the past (GoUNESCO, 2014). These organizations seek to immerse visitors fully within history, rather than remembering one specific event. Notably, they incorporate sensory experiences, utilizing authentic sights, sounds, and even tastes and smells to enhance immersion (Weeks, 2004).

Historic Royal Palaces (HRP) is one such organization in the heritage industry, overseeing six different heritage sites in London. HRP was part of the British Department of the Environment but became an independent charity in 1998.

#### 2.1.1 Kensington Palace



Figure 1: Kensington Palace [Image]. 2018. Retrieved from <https://changing-guard.com/images/content/kensington-palace.jpg>

Historic palaces are a special kind of heritage site, holding much significance in the industry as there are so few in existence. Many historic events have occurred within palaces, and organizations aim to preserve palaces in order to protect the memory of these events.

Kensington Palace (Figure 1) is one of the six historic palaces that HRP maintains. For more than 300 years, the palace was home for many young royals, including

Queen Victoria, and is still houses several royals today (Historic Royal Palaces, 2019). It was built in 1605 by an architect named George Coppin (Law, 2013). In 1899, Queen Victoria decided to open the State Apartments in Kensington Palace to the public with the intent to educate the general public about the history of the royal family (HRP, 2019). Currently, the only areas that are open to the public are the State Apartments, rooms that were previously private living spaces for royal members. Other parts of the palace are closed to the public and serve as a

residence for members of the royal family, including TRH The Duke and Duchess of Cambridge and their children (Historic Royal Palaces, 2019). Other than the two new exhibits on Queen Victoria, there are two other exhibits that tell the stories of King William III and Queen Mary II, and King George I and II.

HRP, like many other organizations managing historic palaces, experiences several challenges in displaying Kensington Palaces as a tourist attraction. One major problem is that palaces are often “living buildings” and have changed over time. In some palaces, formerly impressive rooms are no longer decorated the same way they used to be, and in others, rooms have been updated so drastically that they are no longer authentic to their original time period. Other difficulties can include current royal use and limited facility space for amenities such as restaurants, buggy parks, or lockers.

### ***2.1.2 Victoria: A Royal Childhood and Victoria: Woman and Crown***

HRP has recently reopened Queen Victoria’s apartments to create two new exhibits on the first floor to celebrate the 200th anniversary of her birth. The first exhibit, *Victoria: A Royal Childhood* (Figure 2), is a family-friendly exhibit that HRP hopes will entice more family and domestic visitors to Kensington Palace. The route not only includes historic locations in the palace itself but also contains significant items from HRP’s collections. HRP’s goal is not to have each room be its own exhibit, but rather to provide visual cues that will enhance visitors’ imaginations and create a storyline within the exhibits, helping visitors build an emotional connection with the Palace (E. Morioka, personal communication, May. 2019).



Figure 2: Family Feud Room in Victoria: A Royal Childhood [Image]. Retrieved from <https://hrpwpblogscdn.azureedge.net/uploads2/2019/05/E8A6843-1024x618.jpg>



The second exhibit is *Victoria: Woman and Crown* (Figure 3), which covers Queen Victoria's later life and legacy, examining her roles as mother, wife, grandmother, monarch, and widow. This exhibit also focuses on the British Empire, particularly foreign relations from the Royal Family's perspective, and how Queen Victoria balanced her roles as a public figure with her private life (E. Morioka, personal communication, May. 2019).



Figure 3: *In Sorrow Shut* art installation in *Victoria: Woman and Crown* [Image]. Retrieved from <https://www.hrp.org.uk/kensington-palace/whats-on/victoria-woman-and-crown/#gs.izvpa8>

## 2.2 Creating Effective Exhibits

Many exhibits at museums and heritage sites are regularly being updated and replaced in order to meet visitors' wants and needs in relation to the museums' goals. There are multiple approaches to addressing these needs: different stakeholders such as visitors, donors, and administration may have specific desires for improvement. Heritage sites may make their exhibits more effective by improving family-friendliness, accessibility, interactivity, and engagement. Each of these concepts has specific best practices that have real-world applications. Sometimes, museums and heritage sites develop internal guidelines, such as HRP's Learning Journey Framework.

### 2.2.1 HRP's Learning Journey Framework

To help determine the success of an exhibit, HRP has created the Learning Journey Framework. This document describes how to "design, deliver and evaluate our content" and assess "the impact of learning and engagement activity." The framework measures learning and engagement in three areas:

- Discovery focuses on how to use the palaces to teach visitors unique stories, new knowledge, and a new understanding
- Participation covers how visitors will interact with and become immersed in a palace, whether it be "self-guided, facilitated, co-created, or self-developed"
- Transformation aims to change the views of visitors using the unique stories that the palace can tell (Historic Royal Palaces, 2019).



In addition to measuring learning and engagement, HRP evaluates project performance for its exhibits through three areas:

- Reach measures the number and types of people who visit and find out about the exhibit or location in question, compared to HRP's anticipated visitor forecasts.
- Quality ensures that HRP keeps its visitors in mind, making sure that they find the experience to be authentic, engaging, and distinctive.
- Value determines if the exhibit enhances the visitor experience and the organization leaves a legacy for the future (Historic Royal Palaces, 2019).

### 2.2.2 Attributes of an Effective and Engaging Exhibit

An **effective** exhibit is designed to address the needs and wants a visitor may have. This means that the visitor finds the exhibit convenient, informative, and entertaining, while the museum is able to retain the visitor's attention and achieve its educational goals. Additionally, an effective exhibit places further emphasis on the quality of its contents and its authenticity in order to draw in and educate the visitor (Black, 2005). Effective exhibits often contain a sort of storyline or theme in which exhibit designers present the objects in order to draw in the visitor, as curators of the Natural History Museum in London have noted. These objects do not necessarily have to have equal importance, but in order to create a compelling storyline or develop a strong theme, each one must hold some sort of significance in delivering the exhibit's message to the visitor. Creating a connection between all of the objects presented in the exhibit helps the target audience to understand or connect with it (Alt, Gosling, & Miles, 2012).

Part of creating an effective exhibit involves making it **engaging**. An engaging exhibit entices the visitor to immerse themselves and learn more. If the exhibit is not engaging, then the visitor will likely fail to read all of the material and instead move on to another part of the museum that they find more compelling. Engaging exhibits contain two key elements, as Black notes:

- The exhibit contains a range and variety of educational elements that present information and objects in different ways, therefore enhancing the visitor experience and creating a high-quality visit.
- The exhibit encourages direct visitor interaction with objects (2005).

### 2.2.3 Attributes of a Family-Friendly Exhibit

One approach that museums have utilized in increasing effectiveness and engagement in exhibits is by making them more family-friendly. Given that families made up 29% of all museum visitors in England in 2017, many museums and heritage sites have worried that the exhibits simply aren't interesting enough to draw families to visit (VisitBritain, 2018). Borun and Dritsas (1997) highlight several characteristics that family-friendly exhibits tend to exemplify:

- A **multi-sided** exhibit means that families can gather around it, allowing for many people to examine it at once;
- A **multi-user** exhibit allows multiple people to interact with the exhibit physically at once—thus, they can touch and maneuver pieces in the exhibit;
- An **accessible** exhibit allows both children and adults to interact comfortably with the exhibit physically;
- A **multi-outcome** exhibit contains complex enough material to allow for open group discussion;

- A **multi-modal** exhibit appeals to different ways of learning, knowledge, and interaction;
- A **readable** exhibit divides text into smaller chunks;
- A **relevant** exhibit builds upon any preexisting knowledge a visitor may have.

In practice, HRP utilizes a framework called the *Guiding Principles for Family-Friendly Route Interpretation*, a set of ten guidelines that the interpretation team uses to create an exhibit that keeps families in mind.

Guideline	Description
Plan for families	Make sure that there is something to engage each family member in each room
Bring everyone in	Encourage the family to play and learn
Design for children can and should be beautiful too	Design exhibits beautifully while accommodating children
Use text wisely	Make text easy to understand and use visuals to pass the meaning onto those who cannot read
Provide choice	Allow visitors to “choose their own adventure”
Integrate the experience	Avoid areas specifically for children. Instead, the exhibit in its entirety should accommodate both adults and children
Help build confidence in exploring the rest of the palace	Make it easy for visitors to decide where they are visiting next within the palace
Have proactive family-friendly staff	Ensure that staff can aid children’s learning while still enhancing the experience for the other visitors
Give people the opportunity to respond	Give visitors the opportunity to reflect and contribute
Enable families to make memories together	Ensure that the exhibit is “playful, surprising and entertaining” and provide “remember when...” moments for families

*Table 1: HRP’s Ten Guiding Principles for Family-Friendly Route Interpretation (Historic Royal Palaces 2019)*

### **2.2.4 Improving Engagement and Family-Friendliness in Exhibits**

Museums and historic sites have explored methods of accessibility and interactivity in their exhibits to better educate their visitors on their areas of expertise. Though each site will naturally vary in content and therefore utilize different methods of displaying each exhibit, improving accessibility and interactivity has proven to increase effectiveness, engagement, and family-friendliness in exhibits.

For example, providing objects that visitors can move on their own allows for a more interactive exhibit experience. Exhibit designers for several American science museums have incorporated various tactile elements into their exhibits, such as pull-out cards, fossil digs, story wheels, and experiment stations. When interacting with these elements, families can learn about scientific concepts in a more hands-on approach, engaging themselves further into the material (Borun & Dritsas, 1997). Though science museums differ fundamentally from historic sites in objective and content, both types of attractions share commonalities with the methods they can utilize to create accessible, interactive exhibits for families to enjoy.

Additionally, using live interpretation methods such as actors and explainers helps visitors, particularly those at historic sites, immerse themselves into the visiting experience. When Kensington Palace hosted the “Enchanted Palace,” an exhibit which featured the stories of many of the princesses that had previously lived there, during palace renovations in 2012, exhibit designers found great success in utilizing live actors playing the roles of the princesses’ servants. Many visitors found themselves emotionally invested in the experience, interacting with the actors and other museum staff as they asked further questions about the princesses’ lives (Carson, Hartman, Maclaran, & Otnes, 2015). Similarly, HRP used live interpretation and hands-on exhibit elements when redesigning the Tudor Kitchens at Hampton Court Palace to great success (Campolieta, Galvan, Johnson, & Wu, 2018).

### **2.2.5 Culture Segments**

In order to increase visitor engagement, exhibit designers try to appeal to different types of people who may view and experience the arts and culture in different ways. Exhibitors distinguish these visitor types using culture segments, categories that differentiate visitors’ “deeply-held beliefs about the role that art and culture play in their lives” (Morris Hargreaves McIntyre, 2019). Culture segments help the heritage industry plan activities and exhibits by providing exhibit designers a framework for what types of visitors would enjoy certain activities, therefore enabling the designers to tailor the exhibit to specifically meet these preferences.

Culture Segment Name (i.e. People Who Seek...)	Description	Examples and Themes of Activities
Enrichment	“[O]lder adults with time to spare who like spending their leisure time close to... home”	Gardening, Home Life, the Past, Nature, Arts and Crafts
Entertainment	“[C]onventional, younger adults for whom the arts are on the periphery of their lives”	The Pub, Thrills, Escapism, Close to Home, Sports, Celebrity
Expression	“[C]onfident, fun-loving, self-aware people who accommodate a wide range of interests”	Living Life to the Fullest, Family, Art, Culture, Nature
Perspective	“The arts and culture are low among their priorities, however their underlying spontaneous nature... provide[s] a focus for engaging with arts and culture.”	Optimistic, Inner Directed, the Outdoors, Reading, Learning
Stimulation	“An active group who live their lives to the fullest, looking for new experiences and challenges to break away from the crowd”	Enjoy life, Risk-taking, Contemporary, Live Music, Going out
Affirmation	“[Y]oung adults, often studying or looking after family at home, for whom the arts is one of many leisure choices”	Family needs, Quality time with others, Wholesome Leisure Activities, Enjoyable Experiences
Release	“[Y]ounger adults with busy working and family lives who used to enjoy relatively popular arts and culture, but have become switched off as other things have taken priority in their lives.”	Work and Family, Entertainment, Near Home
Essence	“[W]ell-educated professionals who are highly-active cultural consumers and creators, they are leaders rather than followers”	Art and Culture, Learning, Adventurers, Experiences

Table 2: A description of each culture segment, the types of people that tend to identify with each segment, and the activities that each segment most enjoys (Morris Hargreaves McIntyre, 2019)

### 2.3 Summary

Using the Learning Journey Framework, culture segments, and other key concepts and best practices, exhibit designers at Kensington Palace created *Victoria: A Royal Childhood* and *Victoria: Woman and Crown* to best meet their goals of creating effective, engaging, and family-friendly exhibits. In order to evaluate how successful they were in achieving these goals, HRP has sought third-party evaluations to gauge visitor demographics and reception. Our team evaluated the effectiveness, engagement, and family-friendliness of these new exhibits at Kensington Palace in order to improve the visitor experience.

## Chapter #3: Methods

The goal of the project is to evaluate the effectiveness, engagement, and family-friendliness of the new *Victoria: A Royal Childhood* and *Victoria: Woman and Crown* exhibits at Kensington Palace in order to improve the visitor experience. We have accomplished three key objectives:

1. Identify common practices and standards for interaction and family-friendliness at other sites and note how they compare to best practices.
2. Determine HRP's motivations for opening these exhibits and the organization's anticipated visitor takeaways from them.
3. Understand who visits Kensington Palace and why, how individuals and families interact with the exhibits, and how these new exhibits compare to HRP's past exhibits.

### 3.1 Objective 1: Identify common practices and standards for interaction and family-friendliness at other sites and note how they differ from best practices.

To understand commonly used methods of exhibit design, we observed exhibits at the Tower of London and Hampton Court Palace, HRP's largest and most visited sites. We also examined exhibit designs at non-HRP sites: the Museum of Childhood, the British Museum, the Natural History Museum, the Science Museum, the Museum of London, and the Queen Victoria and Albert Museum. We created two Google Forms to organize and record our observations. The first form (see Appendix B) contains questions on an entire-museum scale, such as whether school groups are present and what the aim of the museum seems to be. The second form (see Appendix C) contains questions on a single-exhibit scale that describe how exhibits are designed, such as whether an exhibit features characteristics like accessibility and multi-user availability. After we collected this data, we categorized the most common types of exhibit features used by family-friendly museums to help us provide recommendations to HRP.

### 3.2 Objective 2: Determine HRP's motivations for opening these exhibits and its anticipated visitor takeaways from them

We interviewed two exhibit directors and the Director of Interpretation to understand their motivations, goals, and expectations for the new exhibits. These interviews explored the reasoning behind the exhibit designs, characteristics intended to make the exhibit family-friendly, and the designers' plans to engage visitors. In the interviews, we discussed how HRP staff use HRP's Learning Journey Framework (Appendix F) in designing the Queen Victoria exhibits, and how they considered culture segmentation (Table 2). We also discussed whether any exhibit objectives had changed from the original project brief.

We examined the original project design briefs, as well as the evaluation brief which contains HRP's short-term and long-term plans for evaluating the exhibit, to inform our design of visitor survey and observation methods. Table 3 below lists the concepts described in these briefs, provides an operational definition for each, and defines how we measured them.

Concept	Definition	Measurement
<i>Reach</i>		
How many families visit?	A family is a group that includes children and adults but is not a school group.	Survey questions determining group size and family age.
How many members visit?	A member of HRP has purchased a membership and has free entry to all sites.	Survey question asking if the person is a member.
Are visitors coming back?	Has the person visited Kensington Palace within one year? Five years? Ever?	Survey question.
Where are visitors coming from?	London, UK other than London, other country.	Survey question, specifying other country.
What culture segment do visitors belong to?	Expression and Affirmation segments are in line with HRP averages	“Golden Questions” used to determine culture segment in survey, analysis of these later.
<i>Quality</i>		
Did visitors like the exhibits? Would they recommend them?	Visitor opinion.	Survey questions asking about overall experience and exhibit-specific experience
Is the exhibit family-friendly	Family-Friendly: Exhibit includes layered content that appeals to multiple age groups, designers have made spaces to accommodate families.	Survey questions asking visitor opinions on family-friendliness, playfulness, liveliness and excitement, and whether the designers had children in mind
Is the exhibit too family-centric?	Family-centric: efforts to improve family-friendliness might negatively affect non-family visitors	Survey questions asking for any other feedback, observations looking at the differences in behavior between children and adults.
Are exhibits tailored to key culture segments, and does the exhibit follow the HRP design principle of “Choose Your Own Adventure?”	Multi-modal and sensory elements are important to these segments and this principle.	Observations determining whether visitors are using these elements.
Is the exhibit planned, organized, and laid out well?	Whether the exhibit functions properly or has issues that negatively affect visitor experience.	Observations looking for issues, open-ended survey questions.
Is the exhibit relevant to modern life?	Do visitors relate to the emotions expressed in the exhibit, and/or do they draw parallels between their life and Queen Victoria’s?	Survey questions asking what they learned, and whether they reflect on their own childhoods.
<i>Value</i>		
Do visitors feel like their visit was good value for money?	Visitor opinion.	Survey question rating value from 0 to 10.
<i>Impact</i>		
Was Victoria’s story told well? Did visitors learn something?	Did visitors learn certain messages identified by HRP?	Open-ended survey questions, survey questions asking if they learned more or see Queen Victoria differently
Did the exhibit include a social experience?	Is there evidence of families interacting and learning together?	Visitor observations focusing on specific items (toy box, dress up, dollhouse, theater)
How long do visitors spend in the exhibits?	What is the overall time from start to finish? What is the time per room?	Observations noting visitor entry and exit times, approximate times visitors spend per room.

Table 3: Concepts measured in the visitor exit survey (Swords, C., 2019, May 16) (Berni, C., 2019, May 15)

### **3.3 Objective 3: Analyze who visits HRP's exhibits and why, how individuals and families interact with the exhibits, and how well exhibits meet HRP expectations.**

To evaluate the two new exhibits, we collected and analyzed both quantitative and qualitative data based on the concepts detailed in Table 3. Quantitative data, collected primarily through surveys, included responses to standardized questions designed to measure these concepts. HRP uses these questions specifically to enable comparison between different locations and exhibits. We collected qualitative data primarily through observations. While collecting this data, we followed HRP and General Data Protection Regulation (GDPR) guidelines, which required that participants be able to opt out at any time, provide only necessary information, and have their information protected.

#### 3.3.1 Surveys

We designed our survey (attached in Appendix A) using the concepts from Table 1 in Section 3.2 and used standardized wording in some questions to enable comparison to evaluations of other exhibits. Two members of our group conducted surveys towards the palace exit, just before the gift shop and cafe. We chose this location in order to gather as many survey responses as possible from people who had most likely seen all of the exhibits. In order to avoid sampling bias, we asked every person exiting to complete a survey.

#### 3.3.2 Observations

We created a Google Form for each new exhibit (attached in Appendix D) based on the concepts from Table 3. We included general questions, such as entry and exit times and group size, and room-specific questions, such as how visitors interacted with certain items. We performed these observations throughout the day, noting the time for each observation. A team member observed one specific group as they traveled through the exhibit and recorded field notes in the form. From the form responses, we compiled an organized spreadsheet detailing visitor behavioral trends to which we could conveniently refer when analyzing data.



## Chapter #4: Results and Analysis

We categorized our findings into four primary areas: who visited Kensington Palace, how people thought about their visit, what people learned, and how visitors behaved in the exhibits. We also have included a brief section describing our findings from our observations at other museums, used to support our recommendations. From our visitor exit surveys, we gathered a total of 370 samples--however, most of our respondents were not family groups and some visitors choose to opt out from certain sections of the survey. Due to these limitations, we choose to focus the observations on families, although this restraint creates limitations as well, such as not being able to determine how groups which contain only adults interact with exhibits. The sample sizes for observations are 35 in *Victoria: A Royal Childhood* and 30 in *Victoria: Woman and Crown*. These numbers are small due to the time required to conduct an observation.

### 4.1 Who Visits Kensington Palace?

An important part of our project was determining who visited the new exhibits. HRP staff wanted to determine whether the new exhibits attracted different visitors than previous exhibits. We accomplished this goal by asking demographic questions on the survey and keeping track of some demographic data through observations.

#### 4.1.1 Finding 1: Visitors come primarily from the United States and the United Kingdom, similar to previous years.

HRP considers the visitor place of origin an important characteristic to consider when designing exhibits--visitors from the UK tend to know more about British history than international visitors, so it is important to balance differing groups' needs. HRP tracks the place of origin in three major groups: visitors from London, visitors from the UK other than London, and international visitors. We kept the first two categories the same but asked international visitors to specify which country they were visiting from in order to gather more complete data.

Relative to the average of the past five years, there are no significant differences at a 95% confidence level. Relative to the 2018 summer data, only the differences in the UK visitor data are significant. HRP staff suggests that this change may be due to the opening of a new exhibit about Princess Diana in 2017, drawing a greater portion of domestic visitors that year and fewer in 2018.



#### 4.1.2 Finding 2: The most common group size was two people.

In our survey, we also asked participants their group size and if they had any children with them. If they did have children with them, we also asked for their ages.

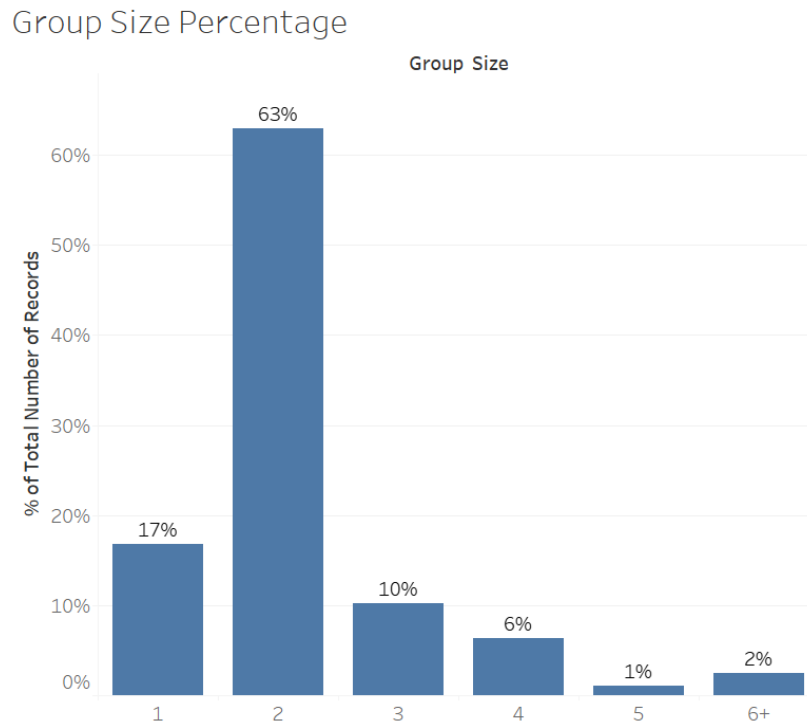


Figure 5: Percentages of visitor group sizes

This graph shows the frequency of group sizes. Groups of two were by far the most frequent group size, making up over 60% of all surveyed groups, which aligns with our expectations based on casual observation of survey participants. It is especially important to note the limitations of the survey. Older couples were more likely to take the survey, while family groups were less likely. Thus, this group size data should not be considered representative.

#### 4.1.3 Finding 3: Children who visit Kensington Palace tend to be older.

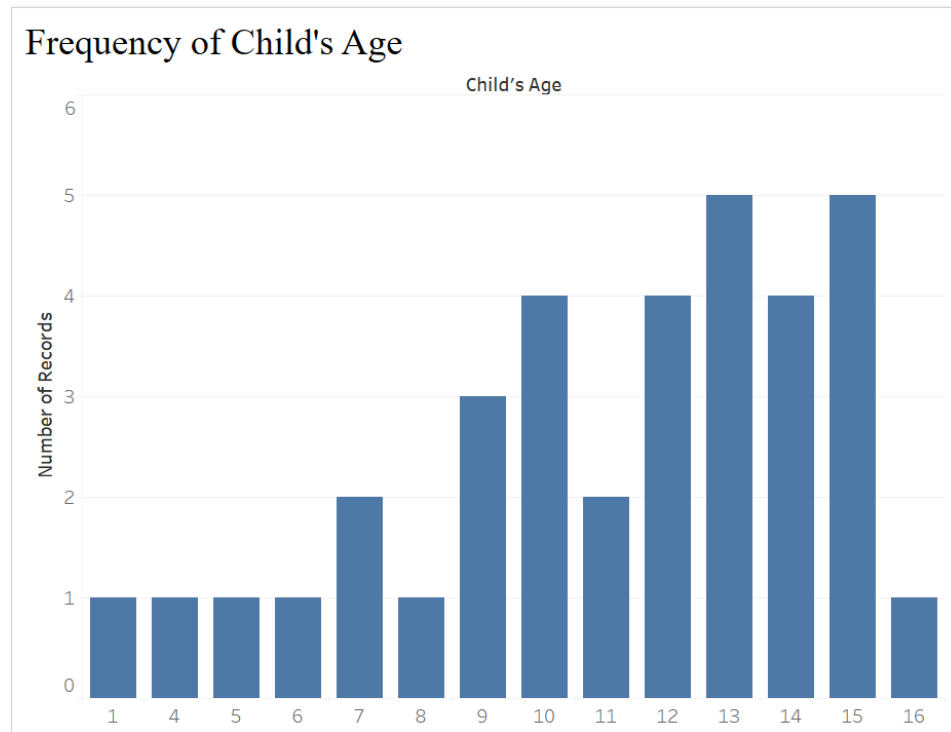


Figure 6: Ages of children that visited the Victoria exhibits and took the survey

Of the 370 surveyed groups, 32 (or 8.6%) had children. The above chart shows the frequency of their ages. There is a clear skewed distribution where children tend to be older. Again, it is important to note limitations--many families with younger children did not take the survey, and so this child age data should not be considered representative.

#### 4.1.4 Finding 4: Most visitors are not members and have never visited before, but the number of repeat visitors has risen.

Our survey also included questions regarding membership and previous visits. Overall, 8.4% of the people surveyed were members. We surveyed no members on the opening day, which we believe was because of the members-only exhibit preview the day before.

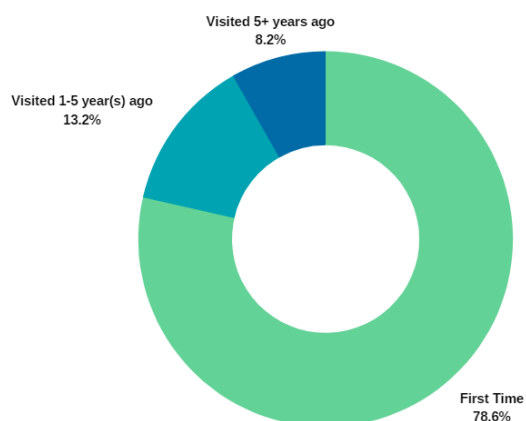


Figure 7: Percentages of returning visitors vs. first-time visitors

The chart above shows that most visitors had never visited Kensington Palace before. However, the percentage of visitors who had visited within five years was 13.0%, which is statistically significantly higher than the past five-year average of 11.4%. This change supports HRP's hypothesis that new exhibits will encourage repeat visitors.

#### 4.1.5 Finding 5: Visitor culture segments are significantly different than in previous years.

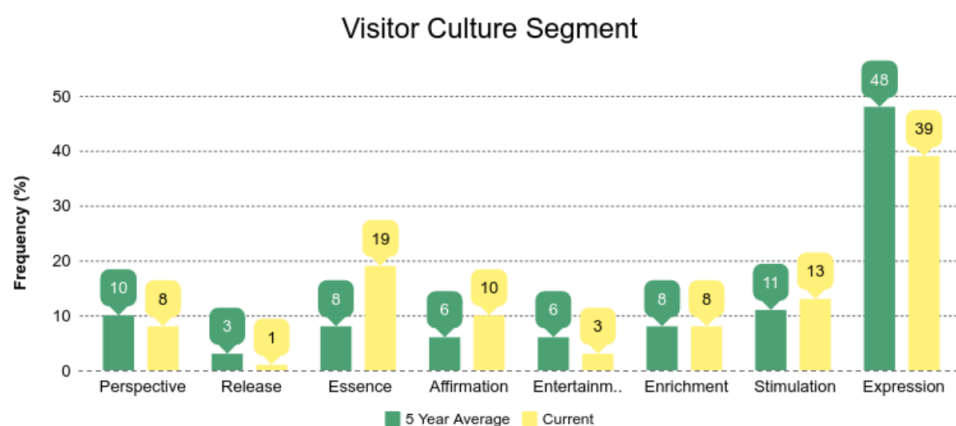


Figure 8: Percentages of visitors belonging to each culture segment

The chart above shows the frequency of visitor culture segments in our data and from the past five years. There are significant differences at the 95% confidence level for the Release, Essence, Affirmation, Entertainment, and Expression segments.

## 4.2 How Did People Feel About Their Visit?

Another important area we studied was how people felt about their visit to Kensington Palace. We asked some questions about visitors' experience in the palace as a whole, including questions to determine a Net Promoter Score and a value for money score, as well as other questions to determine more specific rating on an exhibit-specific level.

### 4.2.1 Finding 6: Compared to previous years, Net Promoter Scores are the same or lower but value for money scores are higher.

The Net Promoter Score (NPS) is a metric HRP uses to assess exhibit quality. The score was calculated by asking visitors how likely they are to recommend a visit to Kensington Palace to their friends and family. The percentage of visitors responding 6 or below was subtracted from the percentage of visitors responding 9 or 10. Responses of 7 or 8 were considered neutral. Kensington Palace's NPS from summer 2018 was 76. The score calculated from our data was 62, suggesting that visitors are less likely to recommend a visit to the palace than last summer. However, Kensington Palace's NPS from autumn 2018 was 48, which is lower than our calculated score, suggesting that NPS may vary significantly between seasons, so comparisons may not be appropriate.

### 4.2.2 Finding 7: Compared to the palace last year, overall experience scores are not significantly different.

	<i>Victoria: A Royal Childhood</i>	<i>Victoria: Woman and Crown</i>	Overall Palace in 2018
Overall Experience	8.72	8.94	8.9
Family-Friendliness	8.59	8.12	8.7

Table 4: Average visitor scores for overall experience and family-friendliness score in current Victoria exhibits compared to the previous year's average

With our calculated margin of error of 5%, the only significant difference based on the overall experience scores is that *Victoria: Woman and Crown* is less family-friendly than *Victoria: A Royal Childhood* or *Victoria Revealed*. Based on staff interviews, this exhibit was not intended to be as family-friendly, and this result is indicative of that.

### 4.2.3 Finding 8: Dwell times were at the low end of the expected range.

When conducting observations, we noted visitor entry and exit times. Based on our sample, average dwell time was twenty-one minutes in *Victoria: A Royal Childhood* and sixteen minutes in *Victoria: Woman and Crown*. Expected dwell times were twenty to thirty minutes for *Victoria: A Royal Childhood* and fifteen to twenty minutes for *Victoria: Woman and Crown*. Although both measured dwell times are within their expected ranges, they are toward the lower end of the range. As we observed primarily families, this finding may indicate families spend less time in the exhibits. Our results here should not be generalized to all visitors.

#### 4.2.4 Finding 9: Poor signage and crowding were common concerns for visitors.

On the surveys, we asked for additional visitor comments regarding topics not previously covered in the surveys. We then categorized the most common responses. Thirty people commented on the signage in the exhibits, often thinking that the signs were too low. From our interviews, we learned that signs were purposefully placed low to attempt to improve accessibility for children. However, we observed that this negatively affected adult visitors.

We also found that twenty-two visitors commented on the crowding in the exhibits. HRP expected crowding issues to some degree in *Victoria: Woman and Crown* as it takes place in the Pigott Gallery, a portion of the museum with rotating exhibits comprised of a mixture of small and large rooms.

### 4.3 What Did People Learn From Their Visit?

Third, we examined what visitors learned from their experience. One of HRP's key goals is to help everyone explore the story of how monarchs and people have shaped society (Historic Royal Palaces, 2019). We asked visitors what their main takeaways were from the Victoria exhibits, as well as their general impressions and how much their opinions of Queen Victoria changed after seeing the exhibits.

#### 4.3.1 Finding 10: Learning Journey quality scores are generally better than or the same as in previous years, with a notable exception possibly due to flawed methodology.

	Discovery	Participation	Transformation
Victoria: A Royal Childhood	8.1	6.9	5.6
Victoria: Woman and Crown	8.0	N/A	6.8
2018 Summer average	7.2	7.1	6.5

Table 5: Average visitor scores for Learning Journey quality scores in current Victoria exhibits compared to the previous year's average

These scores are calculated for three areas of The Learning Journey. Responses are weighted, with the more extreme responses, such as strongly agree or strongly disagree, counting double. Responses for Discovery are significantly higher than the 2018 summer average, although scores for Participation and Transformation are not significantly different, with the exception of *Victoria: A Royal Childhood*'s Transformation score, which was significantly worse. The HRP target benchmark is 8.0, which is met by both exhibits in Discovery but is not met by the Participation and Transformation scores.

We believe that the low Transformation score for *Victoria: A Royal Childhood* was in part due to the wording of the transformation question. We asked visitors whether the exhibit made them think about their own childhood. Many visitors strongly disagreed, stating they did not grow up a princess, missing the intent of the question: determining whether visitors could relate Victoria's loneliness, playfulness, and struggles with her mother to their own lives.

#### 4.3.2 Finding 11: Many people understood basic messages, but few mentioned complex ones.

To further evaluate what people learned, we asked people to describe in a few words what they think the exhibit curators wanted to tell them. We phrased this question in this way because HRP found that people tended to have difficulties answering the question “what did you learn?” We then coded these responses based on expected messages from the original project briefs.

##### *Victoria: A Royal Childhood*

<b>Learning Outcome Goal</b>	<b># of visitors mentioning the keyword</b>
Kensington Palace’s importance	11
Queen Victoria had a strict childhood	208
Queen Victoria’s childhood may not have been as bad as she thought	64
Queen Victoria had a playful imagination	9
Queen Victoria became queen at Kensington Palace	5

*Table 6: Frequency of keywords mentioned in the visitor survey for Victoria: A Royal Childhood*

This table shows that the majority of visitors mentioned that Queen Victoria had a strict childhood. None of the visitors surveyed directly mentioned secondary learning objectives such as Queen Victoria’s relationship with her governess, her forced travels and sickness as a child, or that she met Albert for the first time at Kensington Palace.

##### *Victoria: Woman and Crown*

<b>Learning Outcome Goal</b>	<b># of visitors mentioning the keyword</b>
Queen Victoria’s different roles	24
Queen Victoria’s public and private images	14
Widowhood and losing Albert	163
Queen Victoria and the Empire	22
Queen Victoria as Grandmother of Europe	26

*Table 7: Frequency of keywords mentioned in the visitor survey for Victoria: Woman and Crown*

This table shows slightly more balanced results, although the large majority of visitors still mentioned one theme: Widowhood and losing Albert.

While this data may show that visitors had trouble understanding more complex themes, there are some limitations. Many visitors had trouble answering these questions, providing off-



topic responses including “I learned what the curators wanted to tell me” or “The exhibits were great.” In addition, we found that people often listed just one thing they learned. Although we did not ask visitors if they had learned individual Learning Outcome Goals, we believe that this may provide significantly different data--asking people what they learned is different than asking if they learned about a specific topic.

#### 4.4 Visitor Behavior in the Exhibits

Finally, we observed visitor behavior in the exhibits to see visitor interactions in practice. We noted behaviors, such as the usage of multisensory elements and family interactions in each exhibit, using Google Forms to organize and record our observations. We separated the tracking by adults and children due to potential differences in interactions.

##### 4.4.1 Finding 12: Families tended to miss some multisensory elements.

When conducting observations, we noted whether groups were interacting with the exhibits.

Playing with the toy box

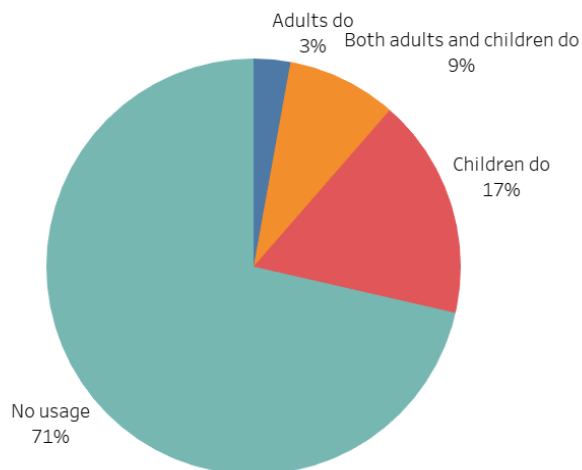


Figure 9: Pie chart showing percentages for visitors who interact with the toy box in Victoria: A Royal Childhood

This graph shows the percentages of visitor groups who interacted with the toy box. Over 70% of the groups did not interact with the toy box at all. This can be directly contrasted with the next graph showing the percentages of visitor groups who interacted with the exhibit in the theater room.

Trying on clothes / Watching the theater

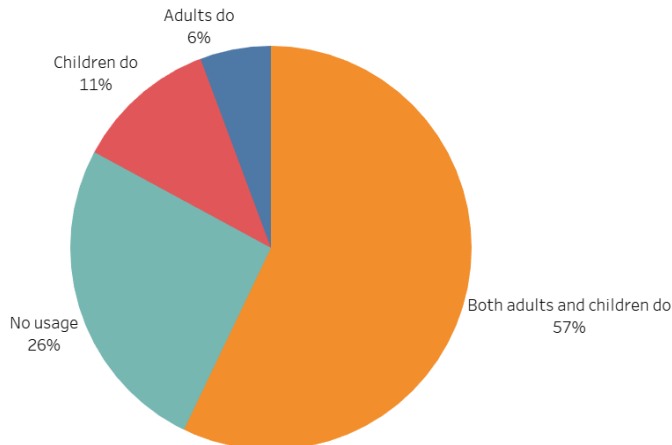


Figure 10: Pie chart showing percentages of visitors that tried on costumes or watched the puppet theater performance in Victoria: A Royal Childhood

Only 25.7% of visitor groups did not interact with the theater room at all. The key difference was that the dress up was very obviously intended for visitor use, while the toy box was not clearly marked. We observed some visitors telling their children that they toy box was not meant to be touched, despite the designers' intent.

Similarly, nearly 86% of visitors did not interact with the family tree item. Although the book was labelled, visitors had to approach quite close to read the label. This resulted in many visitors skipping the book entirely.

#### **4.4.2 Finding 13: A majority of groups watched videos in Victoria: Woman and Crown.**

We found that 50% of observed visitors stopped to watch the introductory video and 62.1% stopped to watch the video about Queen Victoria's grandchildren and legacy. Visitors also commented that they enjoyed these videos in the open-ended response section. This answers HRP staff's concerns that the videos may not be fully utilized. However, the placement of these videos caused some problems with visitor flow and congestion due to the small size of the Pigott Gallery.

#### **4.4.3 Finding 14: Adults often guide children through the exhibits.**

We observed that on more than fifty occasions, adults read exhibit text then described it or asked questions about it to their children. Children often did not read text on their own, which could possibly be due to several reasons. Particularly for younger children, they may not have the reading comprehension to understand the exhibit text fully, or they may simply not have a long enough attention span to read longer pieces of text. However, children may also have felt less inclined to read the text if the parents were already explaining the contents to them. This suggests that families are more likely to read and discuss the signage text together, rather than reading each sign individually.

#### 4.5 Exhibit Observations

When we conducted our observations at other museums and historic sites, we identified four key interactive methods curators used to enhance the visitor experience: touch, sound, video, and technology.

- **Touch.** We observed that every site we visited incorporated items that visitors could physically interact with. At the Victoria and Albert Museum, items included sculptures and masonry. At Hampton Court Palace, visitors were able to touch bed fabrics and textile samples.
- **Sound.** We observed that the Museum of London, the Natural History Museum, the Tower of London, and Hampton Court Palace all incorporated sound to help immerse visitors. One example of audio use was showing how the English language has changed over time.
- **Video.** We observed that every museum other than the Victoria and Albert Museum and the Museum of Childhood incorporated video into their exhibits. Examples of video use include at the Museum of London, where there were dedicated theater rooms showcasing topics such as the Great Fire.
- **Technology.** We observed that every museum we visited except the Victoria and Albert Museum incorporated interactive technology into their exhibits. Some examples of this include touchscreen quizzes, maps, or diagrams.

## **Chapter #5: Recommendations**

As part of this project, HRP asked us to identify areas of improvement for their Queen Victoria exhibits. We list several recommendations below, including a change to the current exhibits as well as recommendations to consider when designing future exhibits.

### **5.1 We recommend HRP make signage larger and clearer.**

In Finding 12, we found that although many visitors interacted with the dress up, few visitors interacted with rooms such as the toy box room. In Finding 9, we found that visitors felt that the signage within the exhibits was hard to read. Overall, signage was the largest concern we identified. HRP staff stated that outside factors led to a compressed timeline for the exhibits. Signage could not be tested on-site before installation, causing this issue. Although HRP cannot update signs within cases without the object owner, they have designed signs attached to walls and tables to be simple to alter. We recommend that HRP print larger signs, and where possible, raise signs higher. This would address accessibility and readability, which are key characteristics of an effective exhibit (Borun and Dritsas, 1997).

It is important to note that this issue may be overrepresented in our sample due to the demographics of survey participants. Many adults and older visitors took the survey, while many young people and families, who may have appreciated the lower signage, did not take the survey. Thus, we were unable to determine from surveys if the sign placement actually helped families.

We also found that some visitors had trouble locating the exhibits or the exit. To address this issue, we would also recommend HRP make signage outside the exhibits larger and clearer as well. We suggest placing signs on the way to the exhibits to inform visitors that they are heading the right way.

### **5.2 We recommend HRP focus on accessibility to their core audience in the future.**

HRP made some design decisions, including placing signs low in the exhibits, in an effort to improve accessibility for children. However, this unexpectedly made the exhibits less accessible for adults and older people.

In addition, we found in Findings 2 and 3 that most groups are small and most visitors are not children. Furthermore, in Finding 14, we found that when children did visit, they were often not the primary people reading signs, making it less important to cater to them. Instead, adults read material and looked at items then explained them to their family. These findings all suggest that focusing exhibits on accessibility for children may not have the desired effects.

### **5.3 We recommend HRP continue focusing on immersive exhibits.**

In Finding 10, we noted that some learning scores (notably Discovery) were higher for the new exhibits than for the palace in 2018. We also noted that the new exhibits demonstrate three of the characteristics we found other museums and historic sites commonly used: touch, sound, and video. Furthermore, we observed that the new exhibits exemplify the two characteristics described by Black: a range and variety of educational elements are present, and the exhibits encourage direct visitor interaction with objects (2005). Thus, we recommend HRP continue creating exhibits in this way in the future.

## Chapter #6: Conclusion

Based on our findings, HRP generally met their goals for *Victoria: A Royal Childhood* and *Victoria: Woman and Crown*. Visitor demographics and quality scores remained relatively similar to previous years, while the Learning Journey quality scores for Discovery improved significantly, with Participation and Transformation remaining similar (with the exception of the flawed Transformation question in *Victoria: A Royal Childhood*). Visitor opinions on the family-friendliness of the new exhibits did not change significantly--however, most visitors who participated in the survey were not families and tended to value family-friendliness less.

Generally, exhibit designers try to make their exhibits accessible for most people to visit. However, different audience groups have different needs. Making an exhibit overly family-friendly can negatively affect other audience groups' experiences. For example, placing signage lower will increase reading accessibility for children but can create issues with taller adults or the elderly. Exhibit designers should seek to strike a balance between pleasing the types of visitors they are targeting and improving accessibility for as many visitors as possible.

## 7: References

- Alt, M. B., Gosling, D. C., & Miles, R. S. (2012). *The design of educational exhibits*. Routledge.
- Berni, C. (2019, May 15). *Evaluation Brief and Plan* [Pdf]. London, UK: Historic Royal Palaces.
- Black, G. (2005). *The engaging museum: developing museums for visitor involvement*. London: Routledge.
- Borun, M., & Dritsas, J. (1997). Developing family-friendly exhibits. *Curator: The Museum Journal*, 40(3), 178-196. <https://doi.org/10.1111/j.2151-6952.1997.tb01302.x>
- Campolieta, K., Galvan, A., Johnson, R., & Wu, C. (2018). Tudor kitchen evaluation. *Digital WPI*. Retrieved from [https://web.wpi.edu/Pubs/E-project/Available/E-project-062018-102003/unrestricted/HRP\\_Team-Final\\_Report.pdf](https://web.wpi.edu/Pubs/E-project/Available/E-project-062018-102003/unrestricted/HRP_Team-Final_Report.pdf)
- Carson, A., Otnes, C. C., & Maclaran, P. (2015). Contemporizing Kensington: popular culture and the "enchanted palace" exhibit. In *encounters with popular pasts: cultural heritage and popular culture* (pp. 165-183). Springer International Publishing. [https://doi.org/10.1007/978-3-319-13183-2\\_10](https://doi.org/10.1007/978-3-319-13183-2_10)
- GoUNESCO. (2014, July 5). 5 Reasons why we should Preserve Heritage Sites. Retrieved June 13, 2019, from <https://www.gounesco.com/why-preserve-heritage-sites/>
- Haywood, N., & Cairns, P. (2006). Engagement with an interactive museum exhibit. In *People and computers XIX—The bigger picture* (pp. 113-129). Springer, London.
- Historic Royal Palaces (2016). *Learning Journey Framework Explanation*. [PDF file]. Personal Email.
- Historic Royal Palaces (2018). *What are the culture segments?* [PowerPoint slides].
- Historic Royal Palaces (2019). *Guiding principles for family-friendly route interpretation* [DOCX].
- Historic Royal Palaces (2019). *Who we are and what we do*. Retrieved from <https://www.hrp.org.uk/about-us/who-we-are/>
- Law, E. (2013). *Kensington Palace, the birthplace of the Queen being a historical guide to the state rooms, pictures and gardens*. Project Gutenberg.
- Morris Hargreaves McIntyre, culture-segments-booklet [PDF]. (2019). Manchester, UK: Morris Hargreaves McIntyre,. Retrieved from [mhminight.com/files/culture-segments-booklet.pdf?download](https://mhminight.com/files/culture-segments-booklet.pdf?download)
- Norris, L. & Tisdale, R. (2017). Developing a Toolkit for Emotion in Museums. *Exhibition*, Spring(66), pp. 100-108
- Swords, C. (2019, May 16). *Evaluation Brief and Plan* [Pdf]. London, UK: Historic Royal Palaces.

Villa, L. (2006). Rediscovering Discovery Rooms: Creating and Improving Family-friendly Interactive Exhibition Spaces in Traditional Museums (Master's thesis, School of Education and Liberal Arts, John F. Kennedy University). Retrieved from [http://www.museum-ed.org/wp-content/uploads/2012/08/Rediscovering\\_Discovery\\_Rooms.pdf](http://www.museum-ed.org/wp-content/uploads/2012/08/Rediscovering_Discovery_Rooms.pdf)

VisitBritain (2018). Discover England: summary insights on overseas visitors [PDF file]. Retrieved from [https://www.visitbritain.org/sites/default/files/vb-corporate/Documents-Library/documents/England-documents/vva\\_2017\\_trends\\_in\\_england.pdf](https://www.visitbritain.org/sites/default/files/vb-corporate/Documents-Library/documents/England-documents/vva_2017_trends_in_england.pdf)

Weeks, J. (2004). Heritage Sites.





## Appendix B: Museum Observation Form

### General Observation Form

\* Required

#### 1. Which Museum/HRP site

*Mark only one oval.*

- ☐ British Museum
- ☐ Tower of London
- ☐ Hampton Court Palace
- ☐ Kensington Palace
- ☐ Museum of London
- ☐ V&A Museum of Childhood
- ☐ Natural History Museum
- ☐ Science Museum
- ☐ Victoria and Albert Museum
- ☐ London Transport Museum

#### 2. Which interactive methods does the site contain?

*Check all that apply.*

- ☐ Touch
- ☐ Sounds
- ☐ Video
- ☐ Technology
- ☐ Smell
- ☐ Other: \_\_\_\_\_

#### 3. Age group

*Check all that apply.*

- ☐ Under 5
- ☐ 5-10
- ☐ 10-15
- ☐ 15-18
- ☐ 18-30
- ☐ 30-50
- ☐ 50+

**4. Is a school group present?***Mark only one oval.*☐ Yes☐ No**5. If yes to the last question***Mark only one oval.*

	1	2	3	4	5	6	7	8	9	10	
1 group	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10+

**6. Number of Families***Mark only one oval.*

	1	2	3	4	5	6	7	8	9	10	
1 group	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10+

**7. Interactive score***Mark only one oval.*

	1	2	3	4	5	6	7	8	9	10	
Nothing interactive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very engaging

**8. Family Friendly level***Mark only one oval.*

	1	2	3	4	5	6	7	8	9	10	
Nothing interactive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very engage

**9. Individual avg dwell time**

---

**10. Family avg dwell time**

---

**11. Additional comments**

---

---

---

---

**12. Recorder \***

*Mark only one oval.*

- ☐ Will
  - ☐ Eva
  - ☐ Phill
  - ☐ Tiffany
-

## Appendix C: Exhibit Observation Form

### Exhibit Observations

Fill out this form for each exhibit you visit at a museum or heritage site.

\* Required

#### 1. Tracker \*

*Mark only one oval.*

- ☐ Will
- ☐ Eva
- ☐ Phil
- ☐ Tiffany

#### 2. Location of Exhibit \*

*Mark only one oval.*

- ☐ Kensington Palace
- ☐ British Museum
- ☐ Hampton Court Palace
- ☐ V&A Museum of Childhood
- ☐ Museum of London
- ☐ Natural History Museum
- ☐ Science Museum
- ☐ Victoria and Albert Museum
- ☐ Tower of London
- ☐ London Transport Museum
- ☐ Other: \_\_\_\_\_

#### 3. Name of Exhibit \*

\_\_\_\_\_

### Exhibit Family-Friendliness

**4. Check off any of the family-friendly attributes this exhibit fulfills. \***

*Check all that apply.*

- ☐ Multi-sided: A lot of people or family members can gather around the exhibit at once.
- ☐ Multi-user: Multiple people can interact with elements of the exhibit at once.
- ☐ Accessible: Both children and adults should be comfortable with interacting with the exhibit. This mostly refers to if adults and children can easily touch or interact with exhibit elements easily.
- ☐ Multi-outcome: The exhibit has enough complex material to promote open-group discussion.
- ☐ Multi-modal: The exhibit appeals to different ways of learning, knowledge, and interaction.
- ☐ Readable: The text is divided into smaller chunks to make information more digestible.
- ☐ Relevant: The exhibit builds upon any previous knowledge visitors may have.

**5. Additional comments?**

---



---



---



---



---

## Exhibit Effectiveness

**6. Does the exhibit have a clear theme or storyline? \***

*Mark only one oval.*

- ☐ Yes
- ☐ No
- ☐ Not sure

**7. If you chose yes, what is the theme or storyline, and how does the exhibit convey this?**

---



---



---



---



---

**8. Do each of the exhibit elements pose relevance to the overall theme or storyline of the exhibit? \***

*Mark only one oval.*

- ☐ Yes
- ☐ No
- ☐ Not sure
- ☐ There is no theme or storyline in the exhibit

**9. Do the exhibit elements appear authentic and of high quality? \***

*Mark only one oval.*

- ☐ Yes  
☐ No  
☐ Not sure

**10. Check off any qualities that you feel the exhibit fulfills. \***

*Check all that apply.*

- ☐ Convenient  
☐ Informative  
☐ Entertaining  
☐ None of the above

**11. Additional comments?**

---

---

---

---

---

## Exhibit Engagement

**12. Check off any appeals this exhibit has towards the senses. \***

*Check all that apply.*

- ☐ Sight  
☐ Taste  
☐ Smell  
☐ Hearing  
☐ Touch  
☐ This exhibit does not appeal to the senses.

**13. Does the exhibit present information and objects in a variety of ways? \***

*Mark only one oval.*

- ☐ Yes  
☐ No  
☐ Maybe

14. Can the visitors directly interact with the objects in the exhibit? \*

*Mark only one oval.*

- ☐ Yes  
☐ No  
☐ Not sure

15. If yes, how do the visitors interact with the exhibit? You can detail how the exhibits appeal to the senses here.

---

---

---

---

---

16. Additional comments?

---

---

---

---

---

**Appendix D: *Victoria: A Royal Childhood* and *Victoria: Woman and Crown* Observation Form**

**Tracker?**

**Entry Time?**

**Number of people in the group being tracked?**

**Is this Group a family?**

If so, how many adults and children are there?

If so, how old do the children appear to be?

**Each Room (questions tailored per room on actual form)**

How long do visitors spend here?

Did the group split up or not?

Any notes on group interactions?

Did any of the visitors in the group interact with the room in unexpected ways?

If yes, explain what sorts of ways the visitor group interacted with the room unexpectedly.

If the group is a family, did adults and children interact with the room differently? (Physical size differences, behavior differences, etc.)

If yes, explain how their interactions differed.

If the visitor group is a family, did both adults and children seem engaged in the room? (Whether they looked at phones, spent time reading text). In other words, was content layered enough to keep everyone engaged?

Do visitors use multi-sensory elements in this room?

What types of comments (if any) did the visitor group make about the room?

What attitudes did the visitor group hold about the room?

Additional comments?

**Final Comments**

End Time?

Final Comments?



**Appendix E: Staff Interview Questions**

1. How do you define family-friendliness? How you see that apply to the exhibits?
2. What is your goal for the exhibit, and how does its design try to achieve this? Any change and update from the previous version?
3. How do you picture visitors interacting with the exhibit?
4. How do you picture families interacting with the exhibit?
5. Are the exhibits engaging for all ages? Where do you see the balance?
6. How long do you expect each visitor will spend at each display? How does that impact the flow of the tour?
7. How do culture segments affect exhibit design?
8. Is HRP's document "Rules for a Family-Friendly Exhibit" useful in exhibit design? What results do you see based on that?
9. What is the message you want the visitors to take away, and how do you plan on accomplishing this?
10. What methods/practices do exhibits use to encourage family-friendliness? Why?
11. Why you choose the current designer for the exhibits (contractor making exhibit)?

## Appendix F: Learning Journey

Historic Royal Palaces (2016). Learning Journey Framework Explanation. [PDF file]. Personal Email

### Learning and Engagement

#### Learning Journey Framework – Evaluation

The Learning and Engagement team measures the impact of learning and engagement activity across audiences using HRP's Learning Journey Evaluation Framework. The Learning Journey Framework is what we use to design, deliver and evaluate our content to drive outcomes for our audiences. Outcomes are the changes that our audiences experience as a result of their engagement with us. We call the outcomes that our audiences have learning impact.

We design and deliver for learning impact across three areas:

#### 1. **Discovery** – what audiences will discover

We are the guardians of remarkable palaces and we speak with an authoritative voice, supported by rigorous academic research; we invite audiences to explore this and bring new perspectives which can reveal an unrivalled collection of unique stories, new knowledge and understanding, for us and our visitors.

#### 2. **Participation** – how audiences will participate

Our palaces are unique and atmospheric by their nature and our audiences should engage with appropriate self-guided, facilitated, co-created, or self-developed learning experiences that will immerse them in this environment

#### 3. **Transformation** – how views and attitudes might change

The historic events that unfolded in our palaces transformed individuals and societies, and these stories can have a transformative impact on our visitors today when they make a personal connection to the palaces, helping them to progress as individuals, family members, or as members of a community.

### Learning Journey outcomes

The outcomes that we design for and deliver are:

- **Discovery:** Acquiring knowledge, engaging with stories, gaining insight or understanding; developing intellectual skills.

- **Participation:** Being active, trying something new or different individually or as a group; developing or practising practical skills.

- **Transformation:** Progressing as individuals or members of a community; changed feelings and perceptions about self and others; changed perceptions about the past, which may also result in changed attitudes to the present; developing academic, vocational, or technical skills.

#### Measuring outcomes

We measure how well projects have performed in achieving the desired outcomes by asking audiences themselves what they think. We have derived a series of “learning impact statements” that we ask audiences to rate in terms of their agreement with each statement. The statements are pre-defined but can be selected according to which ones are most relevant for any

given project. This allows the measurement tool to be flexible to different projects and audiences, yet consistent enough for consistent data. The starting point for developing the statements was Inspiring Learning for All's Generic Learning Outcomes (GLOs) and the Generic Social Outcomes and Arts Council England's work on an outcomes-based model to replace the GLOs. Over the past 12 months, the Learning and Engagement team has refined and tailored these statements and tested them with a wide range of projects and audiences, giving a set of statements which are in line with the HRP cause.

In order to provide greater context to the structured data collected through the Learning Impact statements, we will also use questions from the Generic Learning Outcomes framework to elicit more unstructured information about the learning impact of our projects.