Evaluating the China and South Asia Gallery (Room 33) at the British Museum

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An Interactive Qualifying Project
submitted to the Faculty of
WORCESTER POLYTECHNIC INSTITUTE
in partial fulfilment of the requirements for the
degree of Bachelor of Science

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Date:
21 June 2018

Report Submitted to:

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Abstract

The goal of this project was to evaluate visitors in the revitalized China and South Asia gallery at the British Museum. To achieve this goal, we determined best practices in museum evaluation, identified the British Museum's goals and protocols, and evaluated visitor behavior. Through tracking and surveying visitors, we found that: the most visited bays were Qing, Late Ming, and Early Ming, the most popular object was the Tomb Procession, 64% of the visitors began with the right side of the gallery, and the average dwell time was 18 minutes. To further improve the gallery, our recommendations were to add more audio descriptions, to clarify how the museum gained possession of objects, and to incorporate QR codes on object labels to provide more information in multiple languages.

Acknowledgements

Executive Summary

Since it first opened in 1992, the China and South Asia gallery (Room 33) has helped millions of visitors experience its rich history through a plethora of objects, paintings, and sculptures. Along with its successes, however, the gallery encountered many problems. For example, from an evaluation conducted from a pool of 100 visitors, within the first five minutes after entering the gallery it was found that visitors engaged randomly with objects and did not read any labels. Thus, after remaining stable for 25 years, the gallery underwent a significant redesign and re-opened in November of 2017. With this redesign, the content within the gallery was condensed and brought up to the present day, the structure of the bays was laid out chronologically, and the gateway object approach was introduced. To see if this redisplay has improved the flaws from the original gallery, this research project evaluated visitor behavior in the redesigned Room 33.

1. Literature Review

From the literature review, we determined that the best practices in exhibit evaluation involve a mixture of approaches to recording in detail what visitors do and where they go, including sophisticated tracking studies and extensive personal interviews with visitors. Following the visitor tracking studies of Yalowitz and Bronnenkant, Bitgood, and Morris Hargreaves McIntyre (MHM), we based our evaluation of Room 33 on their observation and tracking methods. These methods included their ideas on recording, collecting, and analyzing unbiased data.

2. Methodology

During the fourteen weeks of fieldwork, the team (1) determined best practices in exhibit evaluation and use of gateway objects to enhance wayfinding, (2) identified the British Museum's goals for the re-presentation of Room 33, and (3) used their visitor evaluation protocols to evaluate how visitors behave in the introductory zone and the rest of Room 33. While the majority of objective one involved extensive desk-based research seven weeks before arriving in London, this research was further supplemented with museum expert interviews during our time in London to gauge a better understanding of best practices in museum evaluation and wayfinding. The completion of objective two, on the other hand, was completed once at the British Museum through interviews with six British Museum staff who helped the team come up with significant questions that our evaluation would address. These questions include:

- Are visitors engaging with and reading the labels?
- Are the gateway objects effective for captivating visitors?
- What are the hot spots (areas of main attraction) in the gallery?
- Is the chronological flow of the gallery being followed?
- What are visitor demographics?
- Where do visitors turn upon entering the gallery?
- What do visitors think of the redisplay of Room 33?

3. Results and Analysis

Through the 300 hours of work dedicated to tracking, observing, and surveying visitors to complete objective three, our analysis of the data provided answers to those central questions.

- One in three visitors are not reading the labels.
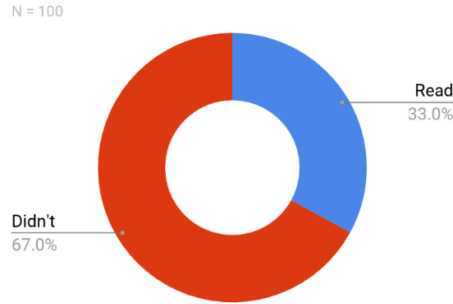
According to the 100 visitors we tracked, only one-third of visitors took the time to read either the information panels at the introduction of each bay or the object labels and descriptions.

- The gateway objects are in fact effective in captivating visitors.
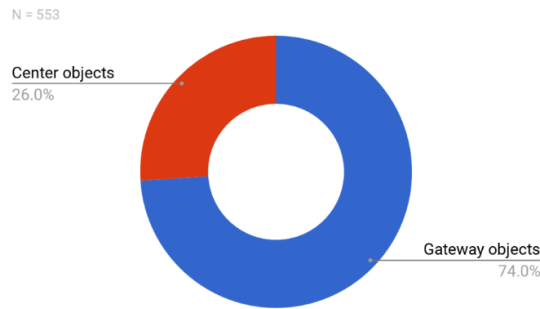
By seeing how much time the visitors were spending on the gateway objects (or not), we determined that the gateway objects were successful. Our results revealed that 74% of visitors approached the gateway objects upon entering the bay. Thus, they were successful.

- The hot spots (areas of main attraction) are located mainly on the China side of the gallery.
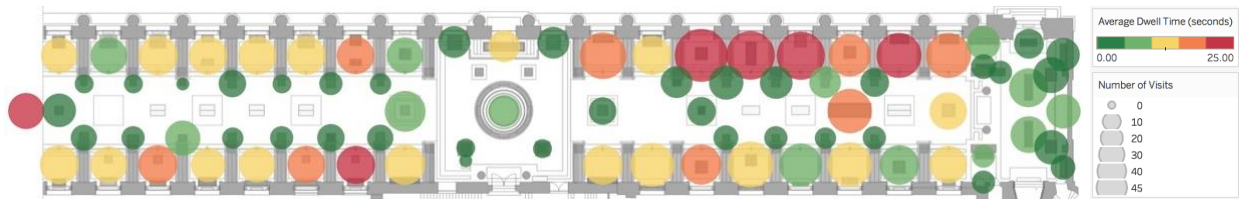
This heat map was created by plotting all of the visitor dwell times and the number of visitors per area. The radius of the circle is proportional to the number of visitors at each spot of the gallery. Also, each color represents the average dwell time in seconds. Since the China side of the gallery contains the largest and most prominent red circles, it is the most popular side of Room 33. These hot spots were further broken down into popularity based on the number of visitors and average dwell time. We associated a longer dwell time as an object or bay being more engaging.

Most Visited Bays

	Rank	Bay	Number of Visitors (out of 100)	Average Dwell Time (s)
China	1	Qing	45	24
	2	Late Ming	36	23
	3	Early Ming	35	26
South Asia	1	South Asia	21	12
	2	Deccan Region	20	14
	3	Himalayas & Beyond	19	17

Most Engaging Bays

	Rank	Bay	Number of Visitors (out of 100)	Average Dwell Time (s)
China	1	Early Ming	35	26
	2	Qing	45	24
	3	Late Ming	36	23
South Asia	1	British Period	18	23
	2	Himalayas & Beyond	19	17
	3	Early History (tie) Princes & Poets	17 (each)	16

Most Visited Objects

	Rank	Object	Number of Visitors (out of 100)	Average Dwell Time (s)
China	1	Tomb procession	28	16
	2	Village Entertainers	19	8
	3	Luohan	17	11
South Asia	1	Shiva Nataraja	22	6
	2	Garuda	14	9
	3	Image of Tara	12	4

Most Engaging Objects

	Rank	Object	Number of Visitors (out of 100)	Average Dwell Time (s)
China	1	Tomb procession	28	16
	2	Luohan	17	11
	3	Thatcher Cottage in the Western Mountains	16	9
South Asia	1	Garuda	14	9
	2	Shiva Nataraja	22	6
	3	Image of Tara	12	4

- The majority of the visitors followed the chronological flow of the gallery.


N = 100

Random 42.0%
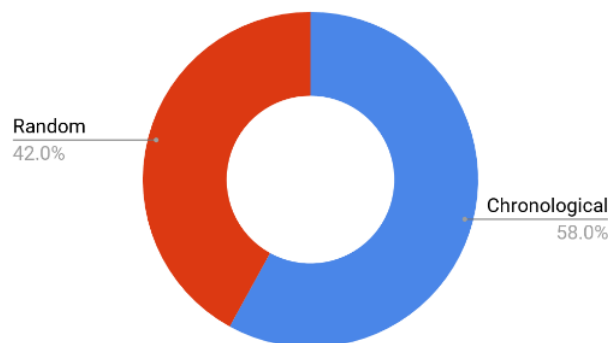
Chronological 58.0%

Visitors were noted down as following the chronological order if they either followed a clockwise or counter-clockwise path throughout the bays in the gallery. From the 100 visitors that were tracked, the majority did follow the chronological order laid out in the gallery. The remaining 30%, however, did not.

- Most visitors are from China, the United Kingdom, and the United States.
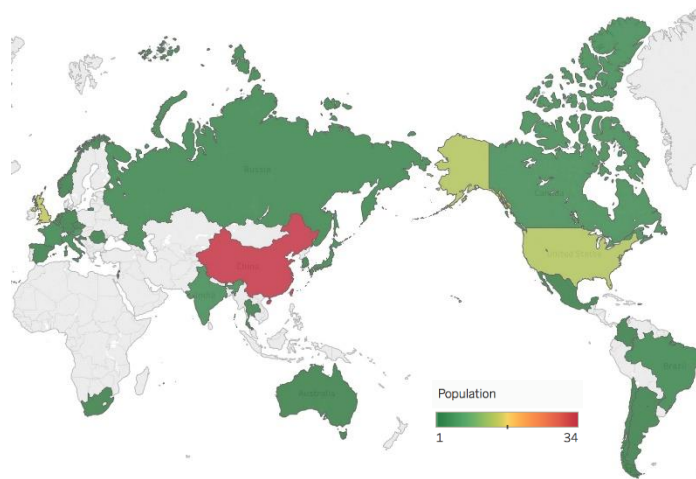
 Our exit-surveys given out to 100 visitors revealed that the majority (34%) of visitors are from China. This is replicated in the choropleth map of the world where China is the reddest. The next two top countries represented in Room 33 are visitors from the United Kingdom and the United States as shown in light green on the map. Furthermore, the age breakdown is shown below. The majority of visitors are between 25-34 years old.
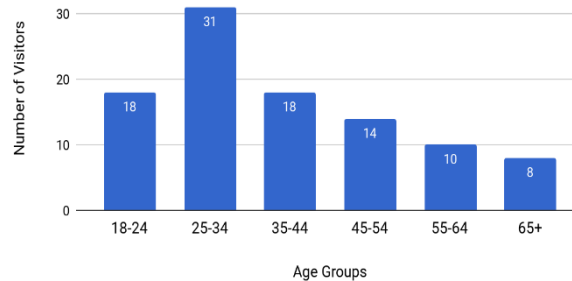
- Most visitors turn to the right (China side) upon entering the gallery.
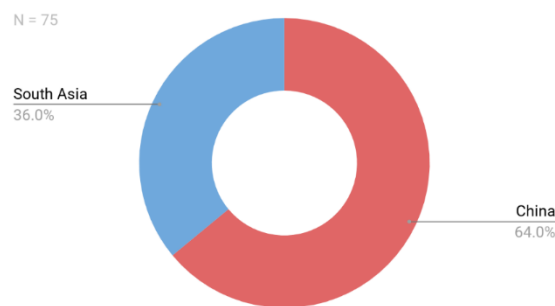
The majority of visitors turn right towards the China side of the gallery. We believe this percentage is so high because the majority of visitors of Room 33 are Chinese. Furthermore, our background research revealed that people have an unconscious bias to turn right rather than left.

- Visitors would like to see more labels in Chinese and more digital interactives.

In our survey, we asked visitors to give comments and suggestions about what they thought about the gallery. This word cloud represents a summary of what the visitors thought. The larger text represents the most common words in all of the suggestions. So, in this case, the words "Chinese," "description," "label," and "interactive" are represented. Since a majority of visitors are from China, they consistently told us that they wanted more descriptions and labels of objects in Chinese. Another frequent suggestion was to make the gallery more alive by introducing more digital interactives.

Although there are more results in the report, these are the key findings that we found from our evaluation of Room 33. Overall, our data shows that the changes made during the refurbishment of the gallery have helped it be more successful compared to the original gallery.

4. Recommendations

Based on our findings from the evaluation and suggestions from staff interviews, we outlined the following recommendations for the British Museum to further improve the gallery:
- Add more audio guide points with detailed object appearance descriptions for visually-impaired visitors.
- Address how the British Museum gained possession of the objects through object descriptions.
- Move the timelines around the oculus towards the front part of the oculus facing the main entrance.
- Use QR codes to make object descriptions in multiple languages.
- Incorporate more digital interactives into the gallery.

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Chapter 1: Introduction

As the sixth most visited museum in the world, the British Museum strives to keep its exhibits fresh, exciting, and relevant in order to engage its visitors and encourage them to return (TEA/AECOM, 2017). In 2005, the British Museum created an Interpretation Team to assess visitors' various needs and motivations (Penrose, Frost, & Miles, 2016). Most recently, the team evaluated Room 33 (China and South Asia Galleria), the longest gallery in Europe.

The evaluation revealed that visitors did not engage with the gallery as the exhibit designers intended. For instance, most visitors completely disregarded the information panels at the entrance to the gallery and went directly towards the nearest objects. After observing the objects on display, most visitors retained little of the most important information, undermining the purpose of the object descriptions. Moreover, the evaluation team concluded the gallery was also very outdated and contained too much information (Stuart Frost, Head of Interpretation, personal communication, 2018). In response to the evaluation, the museum refurbished and re-opened the gallery on December 2017. The refurbishments included the introduction of gateway objects to help people orient themselves spatially and thematically, and the reduction and modernization of gallery content.

Our project goal was to evaluate how visitors of Room 33 engage with the reconfigured displays in order to determine if the redisplay is meeting the British Museum's objectives. To achieve our project goal, we addressed three key objectives. We identified best practices in exhibit evaluation, clarified the British Museum's representation goals and evaluation protocols, and evaluated the visitors' behavior in Room 33. Through background research, we determined the most appropriate evaluation methods to adopt. Before assessing visitors, we interviewed the curators and other museum staff to gain more insight and critical information about the goals of the refurbished gallery. We used tablets to record the dwell time, path of visitors, and other important variables. Furthermore, to ensure our sample of visitors is representative the international audience of the British Museum, we developed exit surveys in Chinese and English delivered on tablets. From the data that was collected, we evaluated the success of the redisplay and provide recommendations for future gallery developments.

Chapter 2: Background

The British Museum has been helping its visitors understand its collections since its foundation in 1753 (History of the British Museum, 2017). One way it ensures this is by continuously "undertak[ing] research to inform the development of its temporary exhibitions and to make improvements to the permanent galleries" (Visitor Research Evaluation Exhibitions, 2017). It also created the Interpretation Team in 2005 whose role is "to improve the quality of the museum's special exhibitions and to rethink the way displays are produced" (Batty, Carr, Edwards, Francis, Frost, Miles, Penrose, 2016, p. 72). In this background section, we review the changing roles of museums and investigate how research on visitor types, learning styles, and the visitor experience have shaped exhibit and gallery content and design. Lastly, we examine how the Interpretation Team of the British Museum conducts gallery evaluations and uses the results to improve the visitor experience.

2.1 History and Roles of Museums

The word museum originates from the Greek word mouseion which means the seat of the Muses who were the Greek goddesses of inspiration in literature, science and the arts (Karas & Megas, n.d.). The predecessors of the modern museums are private collections amassed by the nobility. Representing the power, wealth, and education of the upper class, these private collections were not accessible to the public (Mathilde, 2017). In the latter half of the 18th century, the upper and growing middle class visited museums for leisure and entertainment (Rosenbaum & Beckert, 2010). Following the opening of the Ashmolean Museum, considered the first public museum in the world, in 1683, private collections became increasingly accessible to public audiences (Lewis, 2004), although this process took several centuries. In the early stages, staff members vetted visitors and accompanied them in the museum. For example, when the British Museum first opened, it only admitted a few selected individuals daily. Similarly, the Louvre only opened to the public on a limited basis (Edson, 1994). In contrast, today visitor numbers of the British Museum have increased from approximately 5,000 a year in the 19th century to more than 6 million a year in the last five years because, like all museums, it is now accessible to everyone (History of the British Museum, 2017).

Today, a museum is defined as "a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment" (Museum Definition, 2018). Museums serve three major roles: (1) to expand and preserve collections of artifacts, (2) to conduct research, and (3) to promote education through exhibits, activities, and programs (including onsite and online) for various audiences (ICOM, 2017).

Approaches to education through the design of galleries, exhibits, programs, and activities have changed substantially in recent decades from didactic presentations of static exhibits to more constructivist, visitor-centric approaches. Research on learning and the results of visitor studies reveal that:

- people come to museums for a variety of reasons besides the acquisition of knowledge;
- the physical, socio-cultural, and personal context affect the visitor experience;
- there are many different learning styles; and
- there are many different audience types.

We discuss each of these themes and explore how museums have changed the way they design and deliver exhibits, activities, and programs to meet the needs, interests, and abilities of their diverse visitors.

2.2 Exhibit and Gallery Content Design

One of the goals of exhibit and gallery content design is to appeal to a wide variety of audiences. To gain an understanding of what factors influence gallery design, we investigated the fundamentals: visitor tracking studies and visitor types. This section discusses these two aspects and concludes with our findings of wayfinding and gallery design.

2.2.1 Usage of Visitor Tracking Studies

Visitor behavioral studies in museums originated in the early 20th century when Arthur Melton and Edward Robinson first introduced a methodological approach to making observations on museum visitors. These first observations noted everything from visitor patterns

in museums to visitor right-turn bias but did not gain popularity until the latter half of the century. By the late 1980s, research in visitor studies expanded to include "visitor orientation, circulation, and wayfinding" (Yalowitz & Bronnenkant, 2009, p. 47). These observational measures led Serrell, a major figure in the field of visitor studies, to publish *Paying Attention* which utilized data collected from over 110 exhibitions from museums, zoos, and aquariums to help standardize timing and tracking observations. Serrell's work also established a concrete way to correlate successful exhibitions with visitor behavior (Yalowitz & Bronnenkant, 2009, p. 48).

Other key figures in the development of visitor tracking methodology were Benjamin Ives Gilman and Alma Wittlin. Through his observational studies in 1916 titled *Museum Fatigue*, Gilman wrote about "what kinds and amount of muscular effort [were] demanded of the visitor who endeavors to see exhibits as museum authorities plan to have them see." To do this, Gilman took pictures of visitors while asking them questions about the displays and determined that the current objects demanded an "inordinate amount of physical effort" (Gilman, 1916, p. 62). In 1949, Wittlin published *The Museum: Its History and its Tasks in Education* in which she detailed both the reactions of museum visitors to various exhibits as well as detailing the responses of museum-goers to different exhibits. From her findings, she suggested how the museum could play a vital part in the present educational and cultural world (Wittlin, 1949). Since then, methods of visitor evaluation have continued to evolve and now typically involve a mixture of approaches to recording in detail what visitors do and where they go, including sophisticated tracking studies and extensive personal interviews with visitors. These recorded details are important to a museum because knowing a visitor's whereabouts and actions enables exhibition designers and planners to determine "how visitors are using the various components of the exhibition, whether the exhibition has good flow, and whether visitors are engaging with the exhibits in the manner intended" (Yalowitz & Bronnenkant, 2009, p. 47).

"Paper-and-pencil" observation and tracking methods are easy to implement but have limitations. Paper-and-pencil methods usually lack detail because it is difficult for data collectors to observe when exactly a visitor stopped, what the visitor is doing, and record all the information accurately and systematically. It is also very tedious to transfer all the written data into digital forms for analysis. Moreover, visitors may be distracted and disturbed by staff observing and recording their activities (Yalowitz & Bronnenkant, 2009, p. 52-53). Newer, more accurate and less obtrusive tracking methods have been made possible through advances in

technology. These methods include using video recordings, smartphones, Bluetooth, Global Positioning Systems (GPS), and Radio Frequency Identification (RFID) to record and sense the locations of visitors throughout exhibits (Moussouri & Roussos, 2014, p. 2). Another recent tracking method uses geotags from photos posted on social media by visitors. A geotag contains information on the location and time of photographs and helps museums better understand which parts of their exhibits are the most popular (Vu, Luo, Ye, Li, & Law, 2017, p. 3). New tracking techniques facilitate the collection of large samples and allow for more detailed record keeping, but these technologies also have their flaws. GPS, for example, is limited in its use because of its dependence on satellites. If any infrastructure blocks its signal from the satellites, often the measurements collected are unreliable (Moussouri et al., 2014, p. 10). These technologies also present ethical concerns regarding visitor consent and privacy.

Whether using digital technologies or paper tracking methods, conducting a timing and tracking study involves recording four types of variables: (1) stopping behaviors, (2) other behaviors, (3) observable demographic variables, and (4) situational variables (Yalowitz & Bronnenkant, 2009, p. 49). Observers typically record stopping behaviors such as: when visitors stop at exhibits; how long they stop; the total number of stops; any behaviors unrelated to the exhibit (e.g., being on the cell phone, discussing topics unrelated to the exhibition, etc.); and indicators of the level of visitor engagement. Other behaviors go beyond the stopping behaviors and include the path taken by the visitor in the exhibit, the social interactions with other visitors/docents/volunteers, and the nature of engagement with interactive elements. Bitgood classifies stopping behaviors and other behaviors as response-impact variables (Bitgood, 2013, p. 15). Observable demographic variables include individual visitor ages, genders, and group size and composition (e.g., number of adults and children). Lastly, situational variables, or setting variables, include any external variables that may affect the visitor behavior (i.e., social influence, architectural design, etc.). Bitgood categorizes setting variables as social conditions and physical conditions (Bitgood, 2013, p. 15).

Recording these variables accurately entails training the data collectors to systematically and rigorously apply visitor observation and tracking protocols. Before testing methods on visitors, it is important for the data collector to have a good idea of the exhibit layout. The data collectors should also run pilot tests on each other to try and fix any discrepancies in the methods before conducting real tests on visitors. For selecting a visitor, a rule of thumb is to draw an

imaginary line at the entrance, or entrances, of the exhibit and observe every third visitor that crosses it. If the exhibit is too popular on a given day, then the number of visitors that cross that line should be extended to every tenth visitor (Yalowitz & Bronnenkant, 2009, p. 51). Once the visitor is selected, how the observation of the visitor is conducted depends on the goal of the study and the layout of the exhibit. If the intention is to determine only how a visitor spends his or her time in an exhibition in general, then the distance between the observer and the visitor can be quite long. If, on the other hand, the intention is to examine visitor interactions at specific objects in the exhibit, then the observer will have to follow closely behind the visitor. Similarly, an exhibit that has objects within close proximity of each other will require that the observer pay more attention to what the visitor is doing. Thus, the observer distance to the visitor will also be relatively close (Yalowitz & Bronnenkant, 2009, p. 51).

Conducting time and tracking studies also runs into ethical problems. It is debated whether or not a visitor should be notified that he or is she is being observed or if simply posting signs around the exhibit will suffice. Absent notification, a dilemma arises when a visitor realizes a data collector is observing him or her. To address this issue, Yalowitz and Bronnenkant suggest that the collector carry an information sheet that explains the purpose of the study (Yalowitz & Bronnenkant, 2009, p. 55).

At the end of data collection, visitor studies typically produce data that "identif[ies] trends and patterns in visitor behavior that can inform the design of future exhibitions" (Yalowitz & Bronnenkant, 2009, p. 58). Examples of data are flow maps, heat maps, and decay curves. Flow maps are used to graphically represent visitor flow through a specific site or exhibition. The more heavily marked pathways demonstrate the main attractions in an exhibit (Figure 1). Alternatively, heat maps associate specific locations in an exhibit with a level of intensity. These levels of intensity represent a specific color that is associated with dwell time (i.e. how much time a visitor spends at a particular object) and visitor level of activity (Figure 2). Heat maps are effective in identifying the "hot" or most attractive spots of an exhibit (Moussouri et al., 2014, p. 9). Lastly, decay curves demonstrate the proportion of visitors that stay in certain parts of an exhibit over time. For example, Figure 3 shows that the Colossal Squid Tank at the Te Papa Museum in New Zealand attracted the most visitors while the Colossal Squid Video engaged visitors the longest.
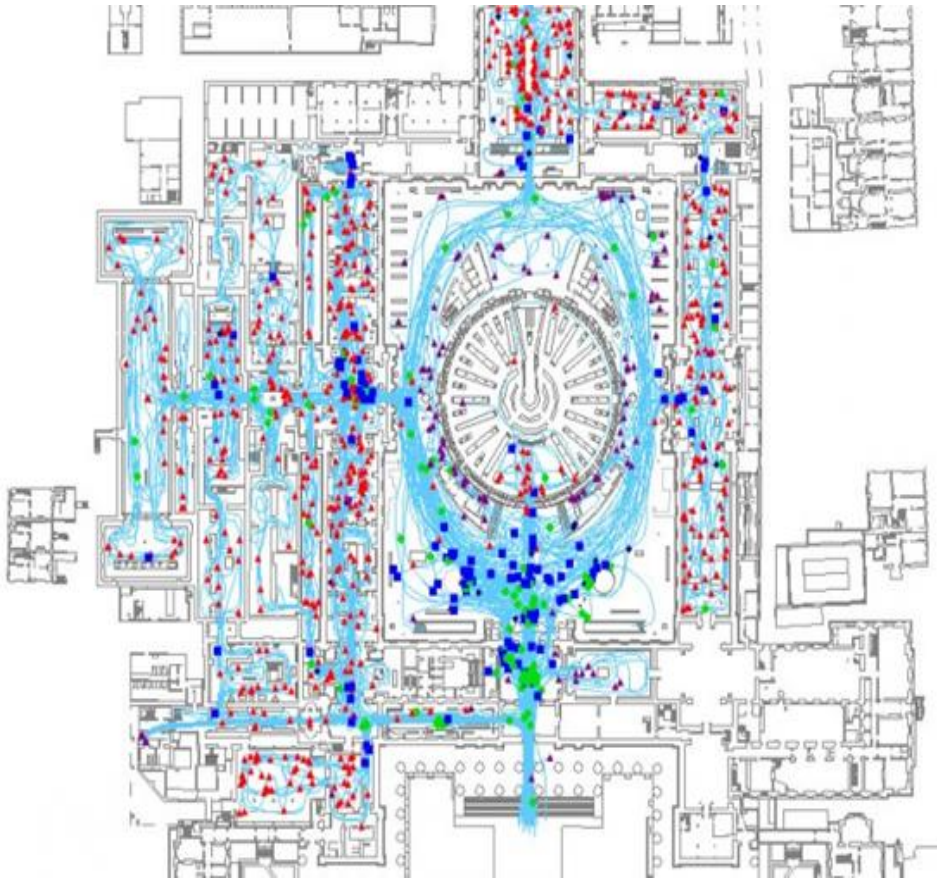
Figure 1: Flow Map of Visitors at the British Museum (Space Syntax Limited, 2018)
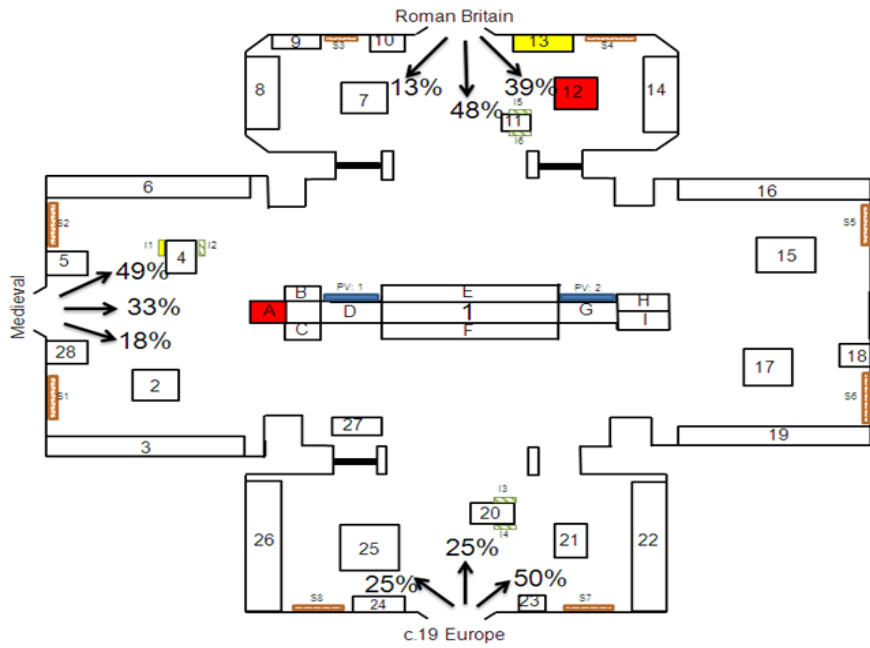
Figure 2: Heat Map of British Museum Room 41 (Moffat, 2014, p. 10)
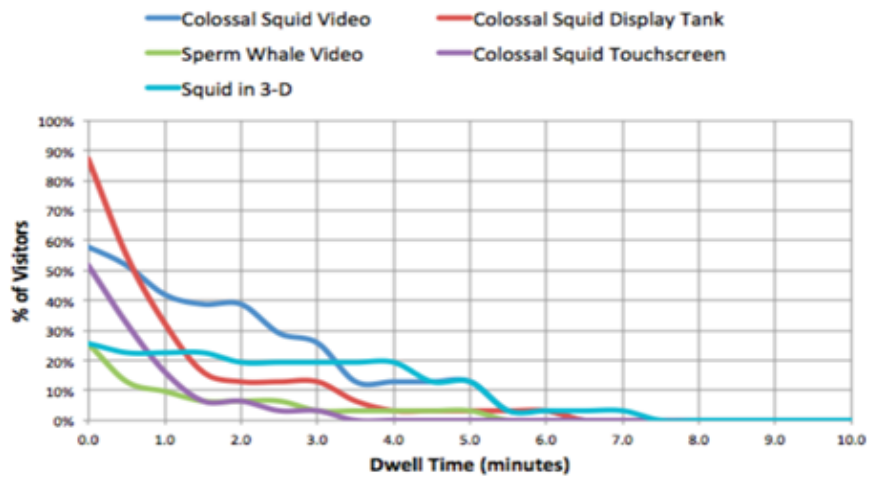
Figure 3: Decay Curve Example New Zealand Te PaPa Museum (Harrington et. al, 2017, p. 39)

2.2.2 Integrating Types of Visitors

Along with incorporating the visitor learning styles into exhibit design, integrating the types of visitors is also an important factor. To model museum visitor behavior, Morris Hargreaves McIntyre (MHM), the largest cultural strategy and research agency in the UK, created a model (Figure 4) that characterizes visitor behaviors into four types: (1) browsing, (2) following, (3) searching, and (4) researching.
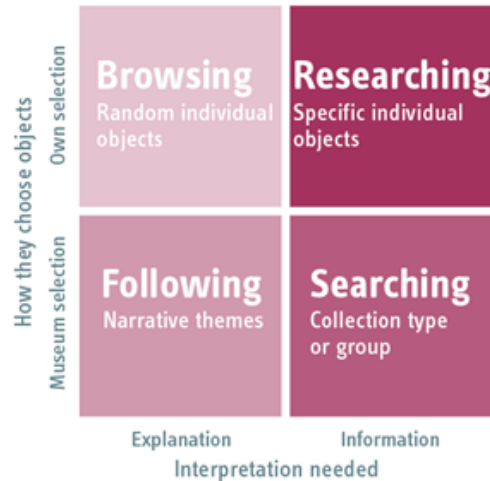
Figure 4: Model of Visitor Behavior Modes (Morris Hargreaves McIntyre, 2018)

As MMG studies show, most visitors are browsers. They wander around randomly and engage minimally with the objects. Followers are the second most prevalent type of visitor; they engage with a sequence of objects led by the museum. Searchers usually know a lot about the subject and have the confidence to go straight to objects or exhibits of particular interest. Only a tiny number of people are researchers; they arrive with substantial pre-existing knowledge and have deep engagement with the objects.

2.2.3 Key Findings about Wayfinding and Gallery Design

As a strategy to captivate all types of visitors, museums use wayfinding. Wayfinding defined as "all the ways in which people and animals orient themselves in physical space and navigate from place to place" in the design, flow and attraction of exhibits at museums across the globe in hopes of helping visitors navigate and engage with the material better (Frey, G, 2012). It tells the visitor where to go, has well-designed spaces and as well as providing the visitor cues to

help find their way around a museum and its exhibits. Highly effective wayfinding needs to be multi-faceted through a combination of signage, maps, guides and even apps to engage museum-goers (Figure 5, 6, & 7). Museums that embrace wayfinding often develop highly creative directions; ones that are functional, emotional and interactive. All these elements combined give museums the chance to provide experiences that "propel visitors along from browsing to following to searching and ultimately perhaps even to researching" (Morris Hargreaves McIntyre, 2018).
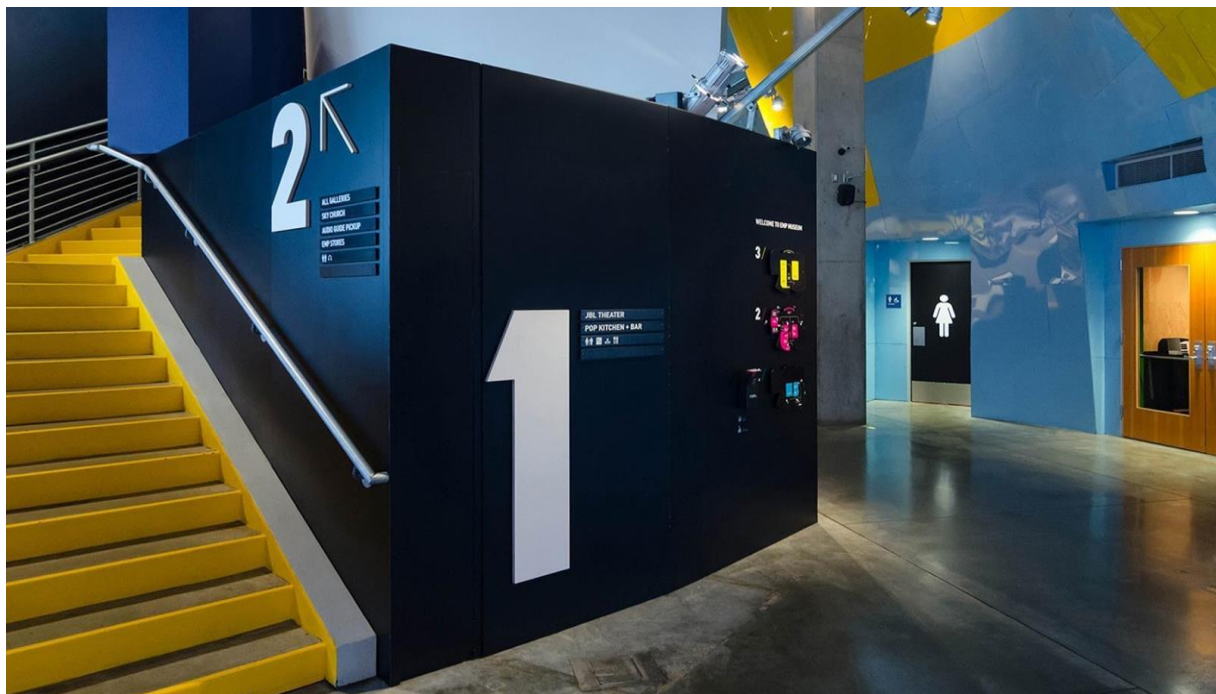
Figure 5: Wayfinding Panel in the EMP Museum (Studio Matthews, 2018)

Figure 6: Sign Figures in the Lighthouse Museum, Glasgow, Scotland (Smashing Magazine, 2010)
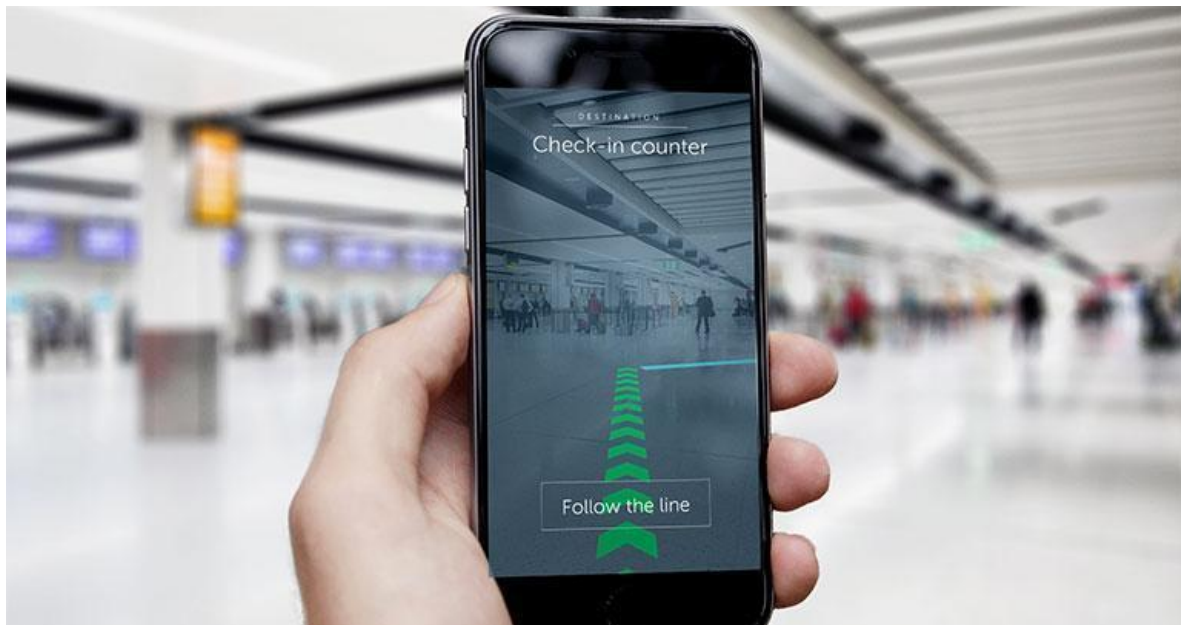
Figure 7: Mock-up of AR wayfinding app in the Gatwick Airport (Passenger Self Service, 2017)

In addition to the visitor's ability to navigate quality exhibits via wayfinding, gateway objects help to educate and inform the visitor. Gateway objects that are innovative and welcoming provide visitors with an overview of the space and theme of an exhibit without having to read the detailed text and/or labels in the exhibit. Through innovative gateway objects, an individual can enter a gallery and will be able to immediately follow a route with the use of key objects without using a map. Museum curators take into consideration the placement and quality of gateway objects particular as it relates to the visitor who is unfamiliar with the museum as well as those whose visit may be unintentional. Gateway objects can provide a sampling in a snapshot all that the museum has to offer with the hope that the visitor engages longer than planned and/or returns for a more intentional visit.

Overall, visitor studies and knowledge of visitor types have revealed some important results on findings of how and why visitors behave at museums that influence the exhibit and gallery design process. According to Bitgood (2010), visitor movement in a museum depends on the perspective that the visitor brings to the museum and the design of the museum. In turn, the patterns of visitor movement are guided by the general value principle. "The general value principle (Bitgood 2005; 2006) argues that the value of an experience is calculated (usually without awareness) as a ratio between the benefits and the costs" (Bitgood, 2010, p. 464). This principle provides an explanation for the right-turn bias mentioned above. When people walk, they tend to stick to the right side of a path. Thus, naturally, it is easier for a person to turn right than to turn left because it involves the least possible effort. This principle also explains why "visitors almost always [choose] a turning combination involving the least number of steps" (Bitgood, 2010, pg. 469). Similarly, visitors typically walk in straight lines unless another factor, such as an interesting display, takes them off the path. Straight lines are the quickest ways to get from one destination to another and involve the least number of steps. For this reason, visitors find backtracking exhibits, one-sided viewing exhibits, and displays that stray from the main path as undesirable (Bitgood, 2010, pg. 470-471). Even when it comes to reading object descriptions, studies have shown that visitors prefer to read short passages over long passages no matter what the visitor interest level is (Bitgood, 2010, pg. 472).

2.3 British Museum Gallery Evaluation

The British Museum has three main steps in evaluating its major special exhibitions: (1) front-end, (2) formative, and (3) summative evaluation. Front-end evaluation is first used to establish a "visitors' prior knowledge, experience and expectations of the subject covered by the exhibition or gallery" (Frost, 2017a). It involves using "[s]urveys, questionnaires, focus groups, observations providing basic information about targeted audiences, [and/or] tasks and goals used during the planning stage of exhibit development" (Screven, 2015, p. 152). Next, testing the front-end evaluation qualitatively is the formative part of the evaluation. This is done by using a prototype of an exhibit to gather observations of visitor reactions. From the results of the testing, improvements can then be drawn to the exhibit in a process called remedial evaluation (Screven, 2015, p. 152). Lastly, once an exhibition is open to the public, the summative evaluation involves conducting research to gage "how successful an individual project has been in meeting its objectives" (Frost, 2017a).

From using their evaluation method, the British Museum has discovered how to best suit and attract its audiences. For instance, evaluations have revealed that there are differences between the visitors who see their special exhibitions (i.e., with an admission charge) versus those that see the free permanent galleries. Compared to visitors who visit the free galleries, special exhibition visitors are highly motivated and have an average dwell time of 75 to 90 minutes (Frost, 2017b). This dwell time is much higher than the average dwell time of regular visitors which is only about three to four minutes (Batty, Carr, Edwards, Francis, Frost, Miles, Penrose, 2016, p. 73). The British Museum's evaluations have also reinforced the positive effect of gateway objects on visitor dwell time. For example, in their 2014 evaluation of the redisplay of Room 41, they found that by introducing the Sutton Hoo helmet as a centerpiece of the gallery, it "resulted in a significant increase in its attracting power from 38 percent to 60 percent" (Frost, 14, p. 8).

Chapter 3: Methodology

The goal of this project was to evaluate how visitors of Room 33 (South Asian and Chinese collections) engage with the reconfigured displays to determine if the redisplay is meeting the British Museum's objectives. The team has identified three primary objectives to achieve this goal:

1. Determine best practices in current exhibit evaluation and in the use of gateway objects to enhance wayfinding;
2. Identify the British Museum's goals for the re-presentation of Room 33 and utilize their visitor evaluation protocols;
3. Evaluate how visitors behave in the introductory zone and rest of Room 33.

We used a variety of evaluation techniques to fulfill these objectives, which included: desk-based research, interviews with staff and museum experts, and visitor observation, tracking, and exit interviews. Figure 8 illustrates the relationship between the overall goal, the objectives, and the research methods. Appendix A represents our preliminary schedule for completing our tasks. We provided a set of preliminary interview scripts, observation sheets, and survey instruments in the appendices section of the report.
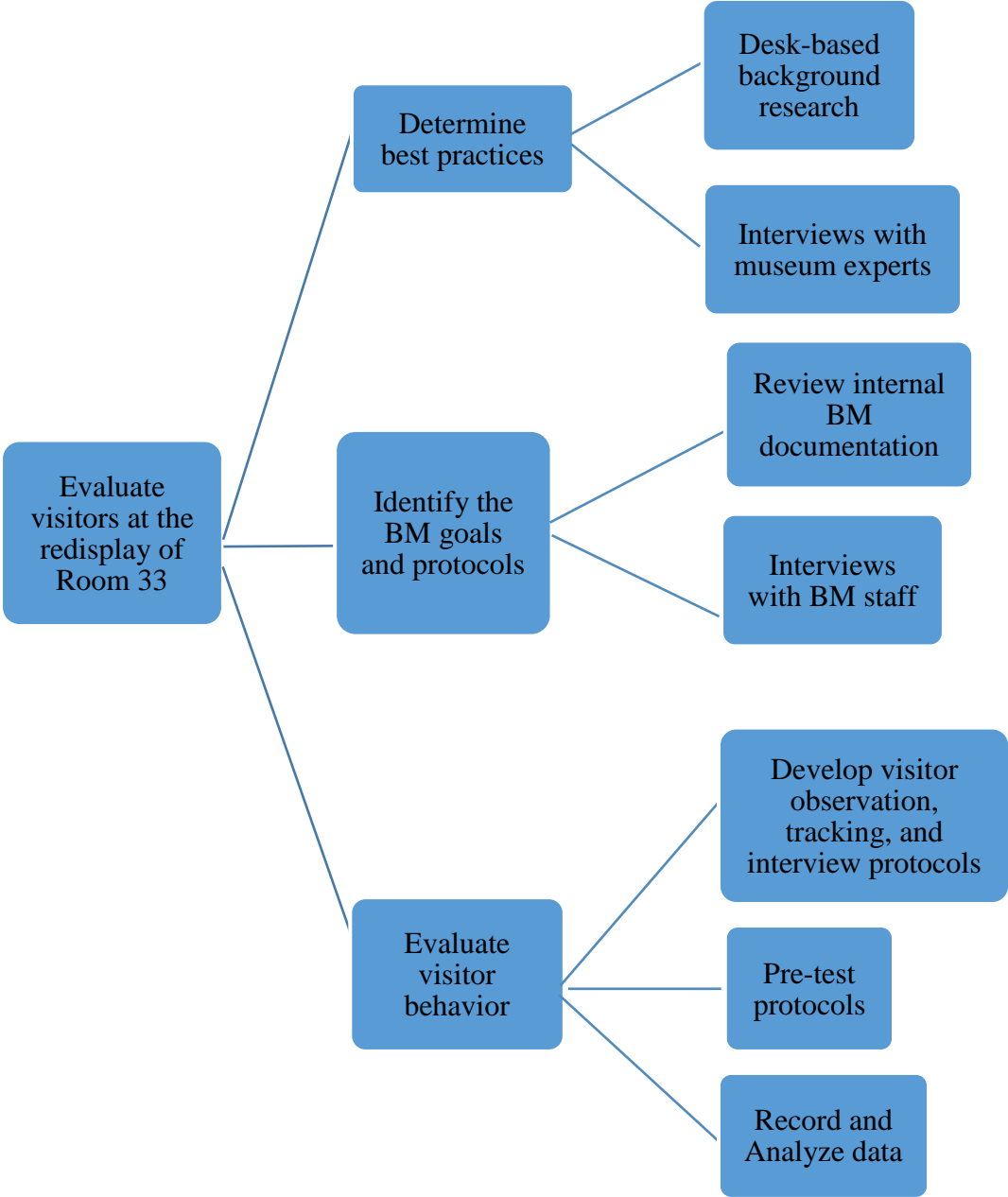
Figure 8: Overall Goal and Associated Tasks

3.1 Objective 1: Determine best practices in current exhibit evaluation and in the use of gateway objects to enhance wayfinding.

The first objective was to identify best practices in current exhibit evaluation and in the use of gateway objects to enhance wayfinding. To do so, we conducted desk-based research and interviews with experts on museum evaluation.

We also reviewed internal British Museum documents regarding their use of gateway objects and previous exhibit evaluations from the Interpretation Team to gain a better understanding of the gateway and exhibit evaluation approach that the British Museum uses for gallery evaluation. We then compared this information to the opinions from outside experts.

These experts included individuals from other museums, academicians, and individuals from the private sector such as those who are exhibit designers. When possible, we conducted these interviews in person. Otherwise, we held phone or Skype interviews. We identified these experts from our background research, recommendations from our sponsor and the British Museum Interpretation team, and referrals from those we interviewed. The script we used for the experts allowed us to frame how the museum community finds the caliber of Room 33 (See attached Appendix B).

3.2 Objective 2: Identify the British Museum's goals for the re-presentation of Room 33 and their visitor evaluation protocols.

We supplemented our review of the internal documents on evaluation protocols and data and analysis from the original display of Room 33 with a series of interviews with the British Museum staff. Through these interviews, we determined the methodological approach that the British Museum uses for gallery evaluation, to clarify the educational goals and objectives of the British Museum's intentions in redesigning the gallery, and to learn more about appropriate data collection instruments.

At the British Museum, we interviewed Jessica Harrison-Hall (Head of China Section), Yi Chen (Curator of Early China Collection), Imma Ramos (Curator of South Asia Collections), Sushma Jansari (Curator of Asian Ethnographic and South Asia Collections), Tess Sanders (Project Manager of Gallery Digital), and Stuart Frost (Head of Interpretation). Through these

interviews (Appendix C), we also gained insight into the intentions and expectations of museum staff for the redisplay of Room 33. During the interviews, we also uncovered other internal documents for review. Conducted by two team members, these semi-structured interviews lasted approximately 30 to 45 minutes.

For both our British Museum staff and outside expert interviews, we followed a specific interviewing methodology. Before beginning the interview, we introduced ourselves and gave our preamble which expressed our interest in the use of gateway objects to improve wayfinding. We then asked permission to record the conversation, but if the respondents preferred, we just took notes. Also, we sought permission to quote the individuals and explained that they had an opportunity to review before publication. If they preferred, we also anonymized the quotations. During the interview process, one of our team members asked the interviewee questions while the other team member took notes of critical quotes and themes. The very last request to the interviewee was to refer us to other museum staff or outside experts with whom we should talk. After establishing the British Museum's goals and evaluation protocols, we developed our methods for evaluating visitor experiences.

3.3 Objective 3: Evaluate how visitors behave in the introductory zone and rest of Room 33.

To evaluate the behavior of the visitors of Room 33, we first developed our instruments and protocols for tracking and surveying the visitors, then conducted a series of pre-testing of our instruments and protocols to make sure they are working correctly, and lastly, we collected and analyzed our data by using our revised protocols.

3.3.1 Visitor Observation, Tracking, and Interview Protocols

Based on the review of the literature, previous evaluation studies, and advice from the British Museum staff, we developed protocols for tracking, observation, and exit interviews.

To track the visitor whereabouts in Room 33, we used the gallery outlines of the main entryway, China side of the gallery, and South Asia side of the gallery to develop protocols for tracking (Figures 9, 10, and 11 respectively). As seen by the long red rectangles on Figures 4 and 5, each side of the gallery has approximately 30 gateway objects with two for each bay that highlight the central themes of the gallery. On the templates of the China side of the gallery and

the South Asia side of the gallery, we numbered each object surrounding the bay (Appendix D) and labeled each bay by its name. The main entrance template, on the other hand, was marked by its objects where its primary purpose is to note the specifics on how visitors first orient themselves upon entering Room 33. We used these protocols to create our trace map and heat map of the gallery which showed the main route taken by visitors and the most popular objects.
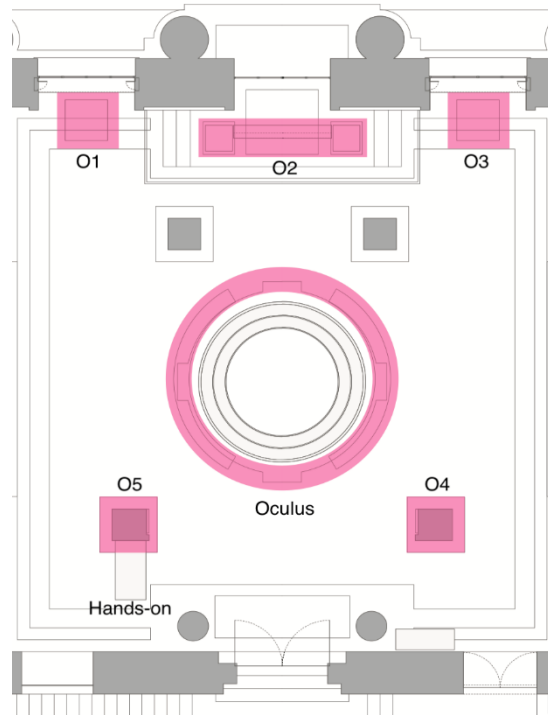
Figure 9: Main Entrance of Room 33
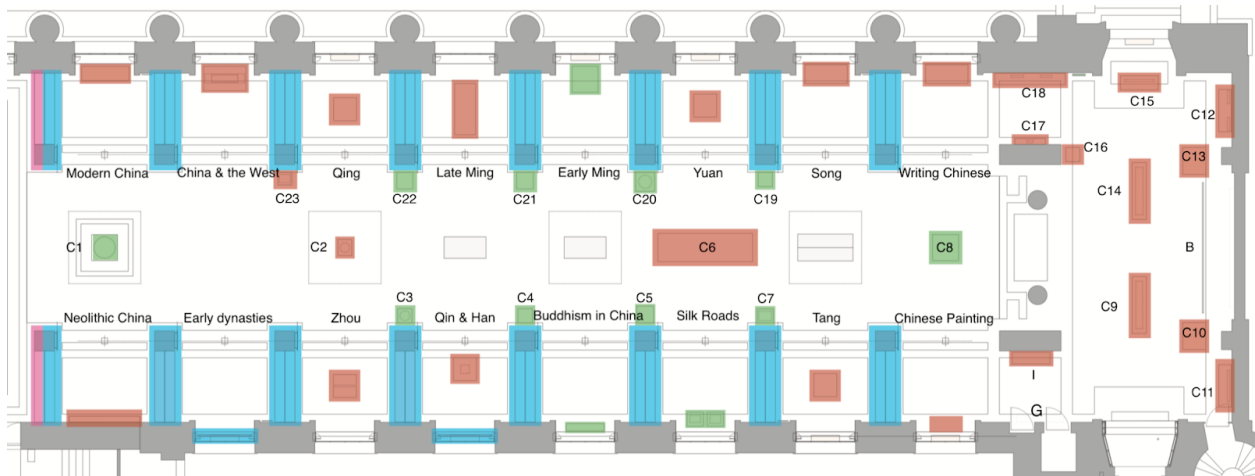
Figure 10: China Side of the Gallery
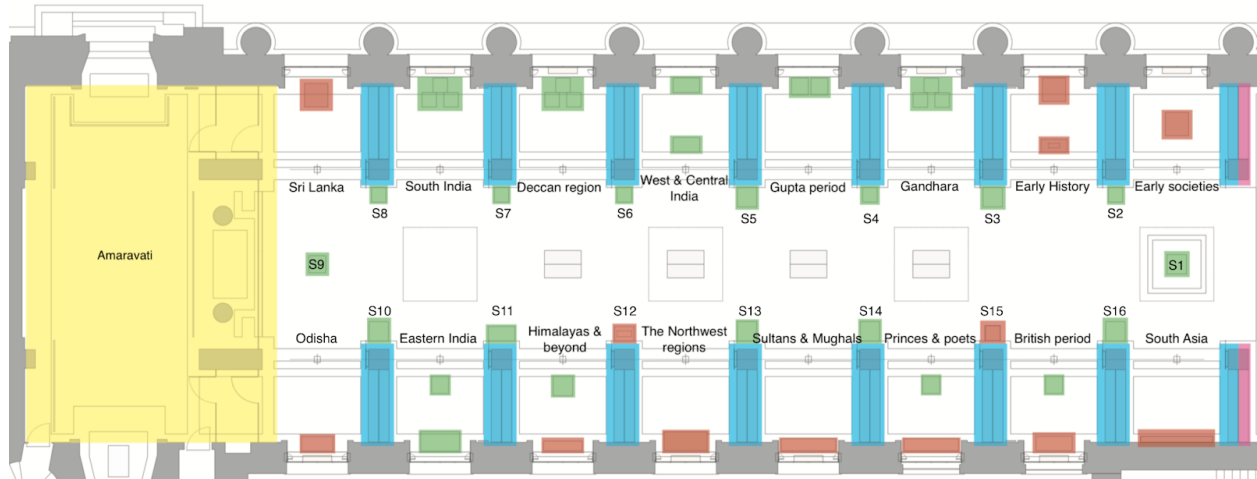
Figure 11: South Asia Side of the Gallery

To select a randomized sample of visitors for tracking, we drew an imaginary line (shown in blue in Figure 12) at the entrance of the exhibit and observed every third adult visitor that crossed it. Depending on how busy the gallery was, we adjusted the criteria for the number of people who crossed the line (Yalowitz & Bronnenkant, 2009, p. 51). For example, when visitor populations were low, we selected every first adult visitor who crossed the line. Similarly, if visitor populations were high, we instead observed every fifth adult visitor who crossed the line. While following and observing the selected visitors around the entire gallery, the team used an observation matrix available on our handheld devices to capture specific variables and visitor behaviors (i.e., dwell time, time of day, visitor behaviors such as reads a panel, takes a picture, consults with group members, etc.) (Appendix E).

Figure 12: Imaginary Line at Entrance

When considering school groups, organized tour groups, and family groups, we did not track school groups because the British Museum only allowed us to conduct evaluations on adult visitors. However, for tour groups and family groups, we tracked and observed the tour guide and the first adult to cross our imaginary line, respectively. We also noted any interactions that the visitor we were following had with other members of the group. For tour guides, we did not want to disrupt their strict, so we did not conduct exit-interviews with them. On the contrary, we did conduct exit-interviews with the adult of the family group.

We tracked the visitor throughout the gallery and solicited their participation in an exit interview when they were leaving the gallery. We then initiated the survey by using a consent preamble, and also letting the visitor know that the full completion of the survey was voluntary and anonymous. If the visitor agreed to take part in our study, we handed the visitor a tablet to complete the survey in their preferred language. As the visitor filled out the survey, we stood nearby just in case we needed to answer any questions that the visitor had.

We developed the exit-survey using Qualtrics, a professional survey collecting and analyzing website. We chose to use Qualtrics because it was recommended to us by our advisors and our university has a license for it. The survey questions were based on the questions used from the previous Room 33 evaluation and include multiple-choice questions and open-ended opinion questions about Room 33, and demographic questions about the visitors themselves (Appendix F). By using similar questions in our survey as in the previous evaluation (e.g., "How easy was it to match the label text to the object?"), we were able to compare our results with the previous data. To reach more visitors, the questionnaire was also translated into Chinese since seventy percent of the British Museum visitors are from China (Appendix G). The survey also included an extra set of questions for the disabled population to determine if Room 33 was meeting their needs. Overall, some of the specific questions that our evaluation addressed included:

● How did visitors orientate themselves on entering Room 33? How much of the introductory material and interpretation did they engage with? Where did visitors go after leaving the central space in Room 33 – which objects did they stop at first?

● What was the average dwell time in this part of the Room 33? What was the attracting power of the different parts of the display in this area?

● What was the dominant visitor flow in this area? What percentage of visitors turned right first and visit China? What percentage of visitors turned left first and visit South Asia?

3.3.2 Pre-test of the Protocols

The last step in developing these protocols was ensuring that they worked by pre-testing them. Chinese-speaking students in our group reviewed the survey questions for clarity. We pretested the observation and tracking protocols on a sample of 10-12 visitors. From these tests, we gained a general idea of how long tracking takes, how useful our instruments were, and the best way to divide tracking in the gallery. When testing the exit-survey, we explained to visitors that we were pretesting the survey and that we would like them to provide feedback on whether the questions were coherent and if the response categories made sense. After the visitor took the survey, we debriefed with him or her to identify any issues and their suggestions.

From the pretests on our tracking, observation, and exit-surveys, we adapted and altered our approaches to tracking and interviewing. We changed both our observation matrix and exit-survey. Instead of using paper to record our observations, the matrix was moved to an excel worksheet to ease the data analysis at the end of the project. With the advice of our sponsor, we also decided to pay particular attention to the dwell times at the gateway objects in each bay instead of finding the general time spent per bay. With the advice of the Interpretation Team, we added an extra set of questions for the disabled population to determine if Room 33 was meeting their needs. With the feedback from visitors, we slightly changed the wording and added text entry boxes.

Using this feedback from the exit-surveys and the consultation with the British Museum staff for other suggestions on how we could improve our instruments, we revised and finalized our protocols. Then, we collected information on visitor behavior by utilizing the observation matrix, gallery templates, and surveys established on our handheld tablets. We did not include the pre-test responses in the analysis of the results.

3.3.3 Implementation of the Protocols

Applying the tracking protocols that we established from above, we started our observations of visitors from the main entrance of the gallery. We divided into teams of two such that one person jotted down the visitor behavior on the observation matrix and kept track of visitor dwell times at gateway objects while the other team member kept track of general dwell time spent per bay and tracing the visitor path. By splitting up the work, we were sure to collect more accurate data because each member only focused on less and specific tasks. Once the visitor we tracked was about to leave, we conducted surveys on tablets following the protocols stated above. This process was repeated on different days and at different times of the day to get a good sample of visitors.

Chapter 4: Findings and Analysis

After conducting several interviews with British Museum staff and museum experts, and collecting data for six weeks using the methodology as described in Chapter 3, we will discuss our findings in this chapter. The results are broken down by each objective. From the outcomes of objective three, we used the data to make recommendations to the British Museum on how they can further improve the gallery in future years. These recommendations are in Chapter 5.

4.1 Best Practices in Exhibit Evaluation and Wayfinding

From the literature and desk review, we determined that the best practices in exhibit evaluation involve a mixture of approaches to recording in detail what visitors do and where they go, including sophisticated tracking studies and extensive personal interviews with visitors. Following the visitor tracking studies of Yalowitz and Bronnenkant, Bitgood, and Morris Hargreaves McIntyre (MHM), we based our evaluation of Room 33 on their observation and tracking methods. These methods included their ideas on recording, collecting, and analyzing unbiased data. Furthermore, we determined how the British Museums incorporates wayfinding in Room 33.

For recording data, we determined that paper-and-pencil observation and tracking methods be avoided because of their limitations. For example, paper-and-pencil methods make it harder to record detail systematically. This method also makes data analysis harder because at the end of the evaluation, all of the written data needs to be transformed digitally. Moreover, it is easier for visitors to notice that they are being observed because holding a clipboard and seeing someone scribble down writing after his or her every move is not subtle. Thus, we used iPads and Kindle Fires for our visitor tracking and observations.

When recording visitor behavior, we found it best to break down visitor behavior into three out of the four variable categories (stopping behaviors, other behaviors, observable demographic variables, and situational variables) that Yalowitz, Bronnenkant, and Bitgood suggested. Under stopping behaviors, we recorded visitor dwell times at each bay, overall time in the gallery, and level of engagement. For other behaviors, we traced the path of each observed visitor and noted any social interactions they had with others in the gallery. Lastly, for

observable demographic variables, we recorded the age group, gender, and nationalities of the visitors.

In noting the level of engagement of the visitors, we utilized the Model of Visitor Behavior Modes from MHM. This model classifies visitors into browsers, followers, searchers, and researchers. Modifying these classifications to replicate past British Museum evaluations, we instead classified visitors as browsers, followers, single-object viewers, China side completist, South Asia side completist, and gallery completist.

Regarding the collection of unbiased data, we utilized the imaginary line method from Yalowitz and Bronnenkant. This method involves drawing an imaginary line at an entrance of the exhibit and observing every third visitor that crosses it. Through using this imaginary line, we ensured that visitors were chosen at random.

Finally, at the end of data collection, we used the fact that visitor studies should produce data that identify trends and patterns in visitor behavior and that can inform the design of future exhibitions. Thus, to represent our findings (Section 4.3), we included a lot of visualization techniques including pie charts, bar graphs, tables, heat maps, trace maps, and choropleth maps. These results allowed us to provide recommendations (Chapter 5) for the British Museum on future designs for Room 33.

As for wayfinding, we referred to the MHM's definition that wayfinding includes a combination of signage, maps, guides and even apps as a strategy to captivate all types of visitors. From analyzing these four aspects in the gallery, we determined how each was used. Concerning signage, before visitors enter a bay, there are introductory sings with descriptions of the bay's overarching theme to give visitors an idea of what they can find in the bay. As for maps, the entrance of the gallery has two maps that explain the layout of each side of the gallery. Regarding guides, there are audio guides available in ten different languages. These audio guides shed light to the top twenty-two objects in the gallery while also allowing visitors to skip over objects if they so choose and also look up object-specific descriptions, for which the visitors need to input the number that corresponds to the object and get more information about it. Lastly, the British Museum has not yet started using apps for wayfinding, but at the end of our data-collection period, they will begin testing twenty QR codes that correspond to particular objects. These will allow the visitors to dig deeper into specific objects in both English and Chinese. If

the response to the QR codes is positive, the museum intends to implement more QR codes in the gallery.

Another aspect of wayfinding involves the gateway object. In Room 33 gateway objects are used for every single case with at least two gateway objects in each bay. The purpose of a gateway object is to whet the appetite for the visitors, trigger their interest in the topic by highlighting the theme of the case, and therefore leave it up to the visitors to decide whether they would like to dive deeper into the subject matter or to continue to another object. Thus, gateway objects are used to influence visitor flow throughout the gallery.

To help us get a better understanding of the gateway object approach and wayfinding, we interviewed Dr. Marquard Smith who is the program leader of the MA in Museums and Galleries in Education at University College London. Having curated before at the Ford Museum, the Milton Keynes (MK) Galleries, and at university and art school museums throughout the UK, Dr. Marquard Smith has worked with gateway objects before. In his words, a gateway objects' "primary function is to both produce the content of the gallery in some kind of exemplary way, and also bring people in. It needs to work from a distance." With relation to wayfinding, he believes that wayfinding and gateway objects are "intimately connected" because "wayfinding is meant to align with gateway objects and be a part of their process in funneling people from one to another." This statement aligns very well with what the British Museum practices.

Altogether, we used the guidance from the published literature of Yalowitz and Bronnenkant, Bitgood, and Morris Hargreaves McIntyre (MHM) as a foundation for the methodology used to evaluate Room 33.

4.2 The British Museum's Goals for the Re-presentation of Room 33

After interviewing five British Museum staff members and our sponsor, we came up with a list of some of the major questions that they would like to see answered from our evaluation of the redisplay of Room 33.

- What are the demographics of the visitors?
- What do visitors do when they enter the gallery?
- What spots in the gallery receive the most visitor attention?
- Are visitors reading and engaging with the labels?

- Are gateway objects effective in captivating visitors?
- How useful are the audio guides?
- Is there any difference in behavior between groups and individuals?
- Are people using and engaging with QR codes?
- How do visitors deal with the controversial origins of objects?
- Is the gallery accessible and friendly to the handicapped and disabled community?

In recognizing that we only had limited time (seven weeks) and workforce (four team members), we have endeavored to meet our sponsor's goals and tried to find a balance between his objectives and that of the other staff members. Thus, we could only fit in feasibly some goals in our short survey and tracking. We present some answers to the questions above through our evaluation findings in section 4.3. We focused on, firstly, dwell time at the middle and on either side of each bay; secondly, how useful the gateway objects are throughout the gallery; and thirdly, how visitors orient themselves (how they get around, where they stop at, and where they leave the gallery).

4.3 Visitor Behavior in the Introductory Zone and Rest of Room 33

In total, we tracked 100 visitors, including 11 tour guides, and surveyed 100 visitors. Out of the 100 surveys given out, only 65 surveys corresponded to visitors we tracked because we received several non-responses and we also did not interview tour guides due to their strict schedules. Thus, we conducted the other 35 surveys with random visitors exiting Room 33. Out of the 11 tour guides tracked, only one tour guide was led by an English-speaking tour guide, which included about 15 visitors. The remaining ten groups each consisted of approximately 25 visitors and appeared to be Chinese speakers.

As evidenced in Table 1 and Figure 13, 34% of the visitors we interviewed were from China; followed by 15% from the United Kingdom and 14% from the United States. However, our observations suggest that many more Chinese visitors are at the gallery with their tour groups in which we were not allowed to interview and, as a result, were not accounted for in the overall visitor nationalities.

| Country	Number of Visitors	Country	Number of Visitors
China	34	Colombia	1
United Kingdom	15	Croatia	1
United States	14	Czech	1
Austria	3	Germany	1
Canada	3	Israel	1
India	3	Mauritius	1
Brazil	2	Mexico	1
France	2	Netherlands	1
Italy	2	Norway	1
Japan	2	Romania	1
Russia	2	South Africa	1
Argentina	1	South Korea	1
Australia	1	Spain	1
Belgium	1	Thailand	1
Chile	1		

Table 1: Nationalities of Room 33 Visitors

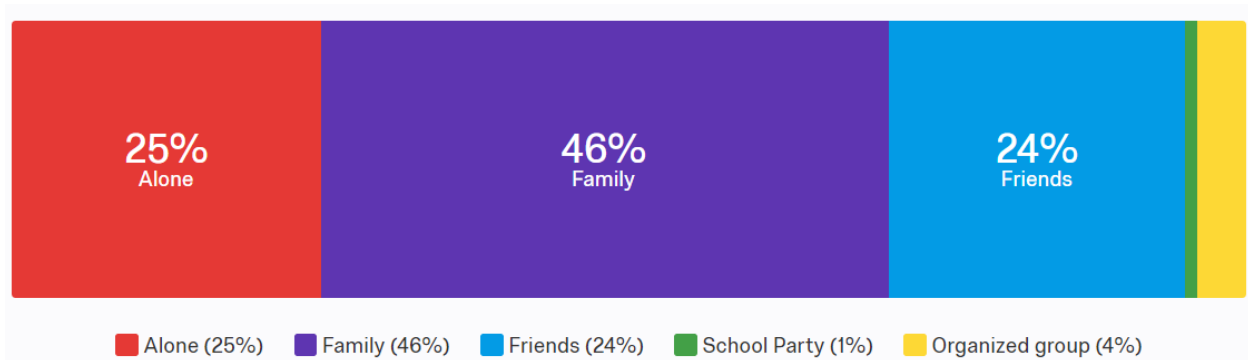**(Source: Visitor Exit-Surveys)**
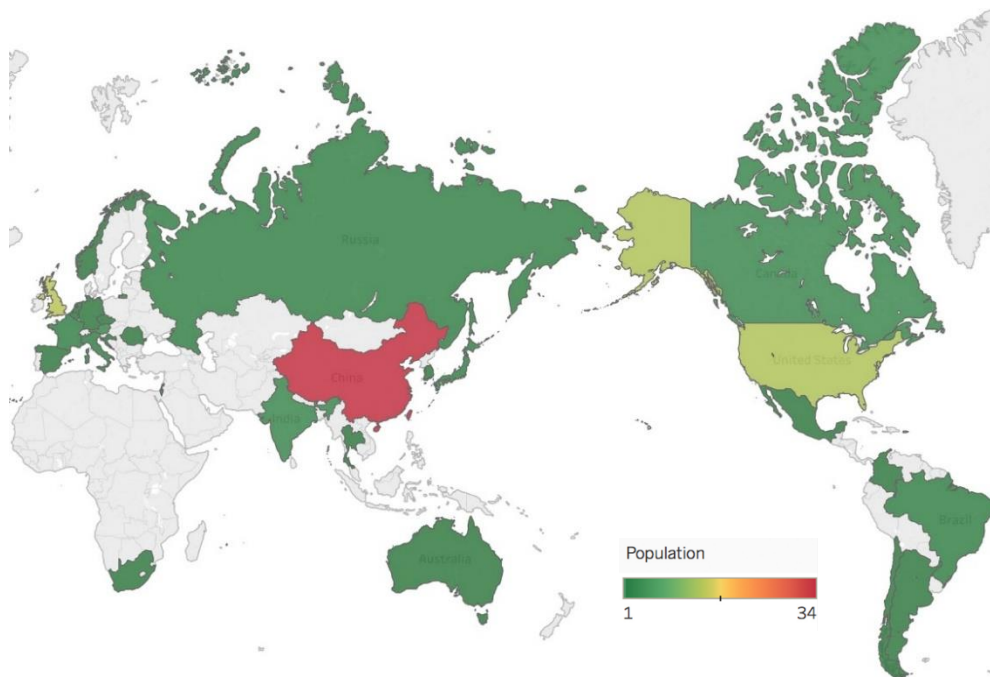
Figure 13: Choropleth Map of Nationalities of Visitors

(Source: Visitor exit survey)

Most visitors we interviewed were aged below 45. The largest age group represented is 25-34, representing 31% of all 100 visitors interviewed (Figure 14). These results do not include children, school groups, and multiple other tour groups of middle-aged adults and seniors in which we were not allowed to interview. As for gender of the surveyed visitors, the male to female ratio was approximately 1 to 1. We also determined the group compositions of visitors. As seen in Figure 15, most visitors came to the museum with their families, followed by entering alone, or with friends.
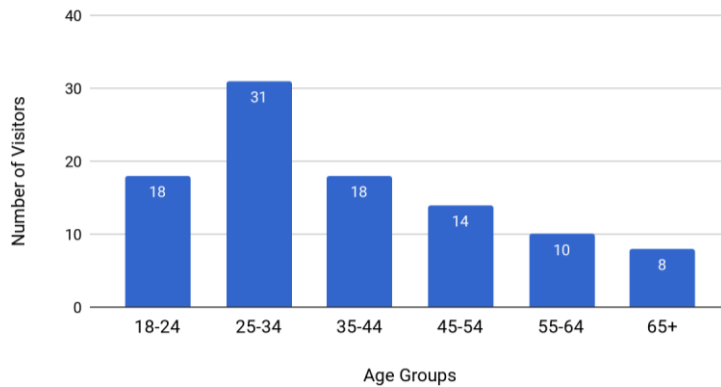
Figure 14: Age Groups of Visitors
**(Source: Visitor Exit-Surveys)**

Figure 15: Visitor Group Compositions
(Source: Visitor Exit-Surveys)

To answer the question as to what visitors do when they first enter the gallery, we first examined what percentage of visitors came in through each of the three entrances (main entrance, Amaravati Gallery, and Jade Gallery). We chose two different days within two weeks and dedicated an hour on each of those days to observe the number of people who came in through the entrances. Using an app on our cell phones to keep a tally of both the number of visitors entering Room 33 and the walk-throughs, we were able to observe a total of 1,913 visitors. As depicted in Figure 16, the majority of visitors (73%) come in through the main entrance of the gallery followed by the 26% of visitors who come in through the Jade Gallery. The remaining 1% of visitors enter Room 33 through the Amaravati gallery. Out of the visitors observed, however, 4.34% or 83 visitors, were walk-throughs. Visitors classified as walk-throughs left the gallery immediately after entering and did not engage with any of the material in the gallery.
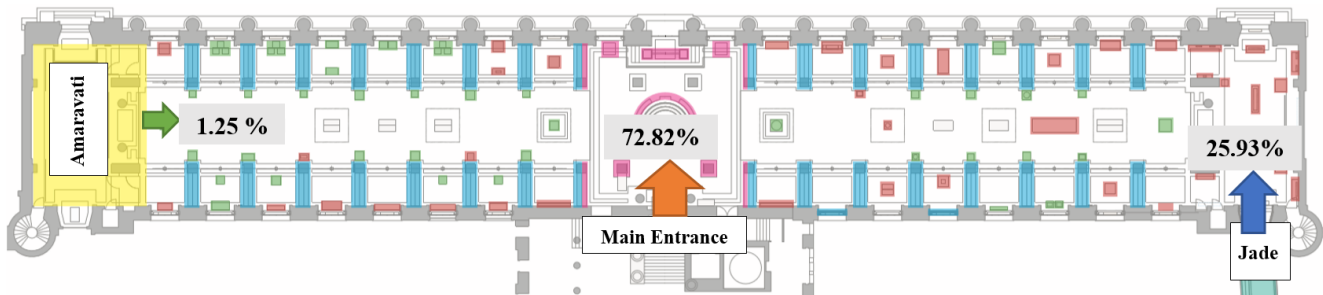
Figure 16: Percentage of Visitors Coming in Through Each Entrance
(Source: Tally App on our Mobile Devices)

After noting that the main portions of visitors come in through the main entrance and Jade Gallery, we decided to track and observe every fourth visitor entering through the Jade Gallery. The imaginary line method described in Section 3.3.1 applied to choose which visitors we observed. Since those visitors coming through the Jade Gallery could only turn into the China side of the gallery, they were not accounted for in the percentage of visitors who turned right versus left at the main entrance (Figure 17).
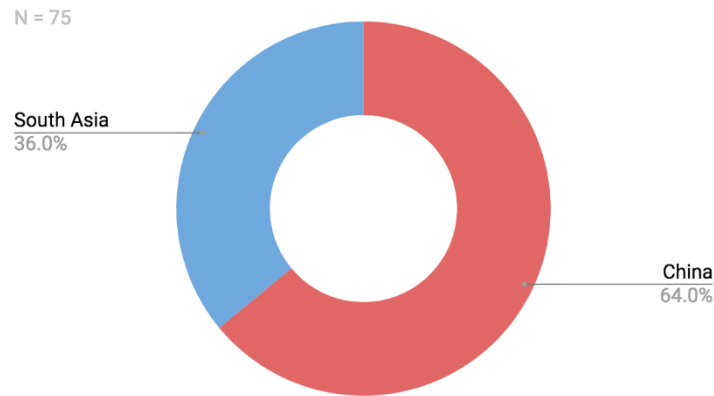
Figure 17: Percentage of Visitors Who Turned Right (China) and Left (South Asia)
(Source: Observation Matrices)

Thus, from the 75 out of 100 visitors tracked from the main entrance, 64 visitors turned right towards the China side of the gallery while the remaining 36 visitors turned left towards the South Asia side of the gallery. We believe the numbers are significantly higher for the China side of Room 33 because the majority of visitors are Chinese (refer to Table 1 above).

Along with noting which side visitors turned when entering the gallery, we also categorized visitors as browsers, followers, single object viewers, China side completists, South Asia side completists, or gallery completists after they exited the gallery. As a reminder of the definition of each term, we define them here again. Browsers are those visitors who wander around randomly and engage minimally with the objects. Single object viewers only come to the gallery to see specific objects and then leave. Followers are visitors who engage with a sequence of objects led by the museum. For example, the followers of Room 33 tended to follow the chronological orders of the bays and spent an ample amount of time in each of the bays they entered. China side completists and South Asia side completists are visitors who complete either side of the gallery respectively. Lastly, gallery completists are those visitors who take the time to see everything in both the China and South Asia sides of the gallery.

Figure 18 reveals that the majority of the visitors we tracked are browsers (70%) and followers (14%). When we asked our Sponsor, Stuart Frost, why the percentage of browsers is so high, he responded that "it is typical to see a large portion of visitors being browsers. Especially since the gallery is so big, it causes visitors just to wander around and only walk towards those objects that stand-out to them." The minority of visitors are then completists who spend more time in Room 33 than any other types of visitors. Similarly, very few visitors were also single object viewers. During our data collection, we noticed that most of the single object viewers had an apparent pre-set plan as to which objects they wanted to see. In fact, the typical single object viewer in Room 33 was an artist who came to the gallery to sketch a specific object.
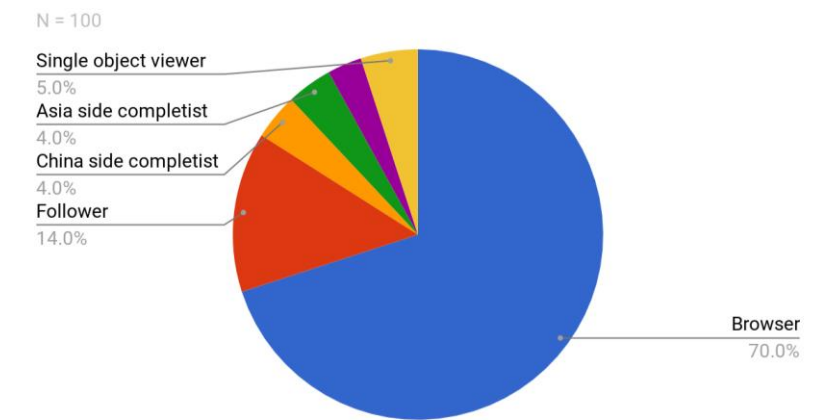

Figure 18: Visitor Viewing Strategy
(Source: Observation Matrices)

One of the highlights of the redesigned Room 33 is that it is now ordered chronologically. For example, each bay corresponds to objects from a specified time period. Depending on whether or not the visitor travels a particular direction in the bays, he or she will be able to see the history of China or South Asia from either ancient time to modern time or the exact opposite. To determine if visitors were aware of this chronological order, we assessed the proportion of visitors following the timeline in either the clockwise or counter-clockwise direction versus those who followed no order throughout the gallery. The results are shown in Figure 19. Out of the 100 visitors tracked, 58 showed the behavior of following the chronological order. The closeness in the percentages of those visitors who followed chronological order versus those who did not indicate that this new design did influence the way visitors walk through the gallery but it still needs further clarification. We did notice, however, that the tour groups all traversed the gallery in the counterclockwise direction (ancient to modern times).
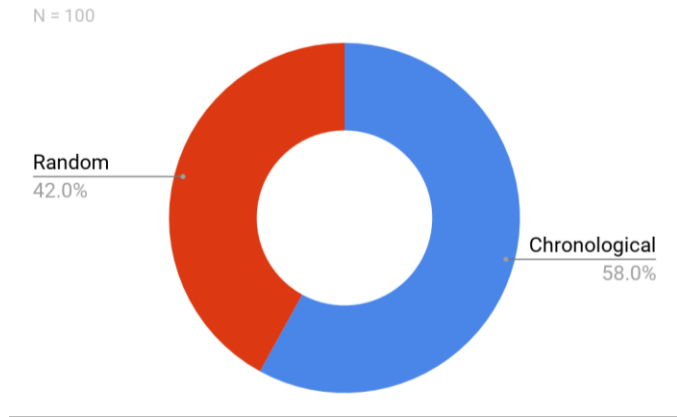
Figure 19: Percentage of Visitors Who Follow Chronological Order
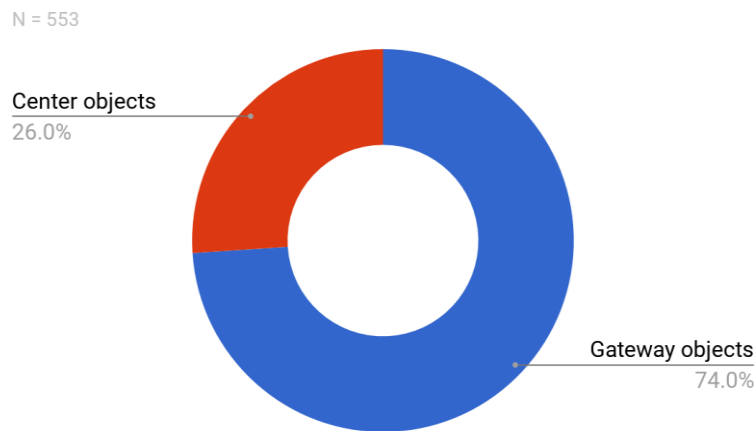**(Source: Observation Matrices)**

Regarding answering the question of whether or not visitors read labels, we found that only 1 in 3 visitors read the labels carefully from the bay introduction panels, the gateway object labels, or other labels (Figure 20). One of the reasons why the majority of the visitors tended to ignore or only glanced at the labels is that English is not a strong language for many. Because the majority of visitors are Chinese and all of the labels are written in English, the surveys revealed that many Chinese visitors wished the gallery had Chinese label descriptions.
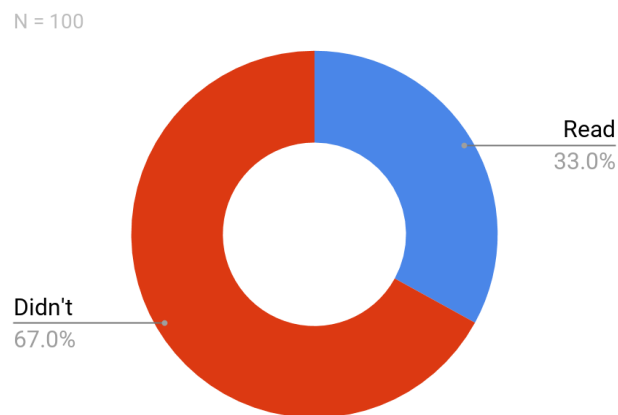
Figure 20: Percentage of Visitors Who Read Labels
**(Source: Observation Matrices)**

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While determining if visitors are engaged by noting if they are reading labels, we also indicated if they took pictures of objects or labels, returned to a bay to study objects further, or if they used an audio guide or British Museum book guide during their visit. Our results revealed that 52% of visitors took photos of objects or labels, 33% returned to a bay, 13% used a book guide, and 10% used an audio guide. To clarify, the British Museum book guide was the book that could be bought either at the Information Desk or the gift shops. This book only covered specific objects at each gallery in the museum.

In assessing visitor behavior in Room 33, we also paid close attention as to where visitors went first when they entered a bay. Considering that one of the major changes in the redesign of Room 33 was the introduction of gateway objects, we noted down whether visitors were attracted to the gateway objects. Chosen as objects that are both aesthetically and historically significant, the purpose of a gateway object is to attract visitors and teach them the main highlights of the case. Thus, if a visitor went towards the right or left cases of a bay (where the gateway objects are located) instead of the center cases of the bay, this meant the gateway object was effective in attracting the visitor. Figure 21 shows that approximately three-quarters of visitors were drawn to the gateway object. This large percentage of attracted visitors demonstrates that the gateway object approach was successful.


Figure 21: Attraction of Center Objects versus Gateway Objects
(Source: Observation Matrices)

When tracking and observing visitors, we also traced visitor paths throughout the gallery and recorded the dwell times where the visitor stopped in the gallery. We traced a total of 108 visitors and created an overall trace map (Figure 22) by overlaying each of the individual trace maps. The way the trace map works is that the darker and more prominent lines signify that more visitors followed that route. So, on the China (right) side of the gallery, it is easy to see that visitors walked deeper and more frequently into the bays, while visitors on the South Asia (left) side tended to walk straight to the end of the gallery and return to the oculus to exit directly. The trace map also demonstrates that most visitors did not see the canvas pictures of China and South Asia which are placed before the beginning bays of each side. These canvas pictures are meant to provide context for the visitor so that the visitor can understand what each side of the gallery is displaying.
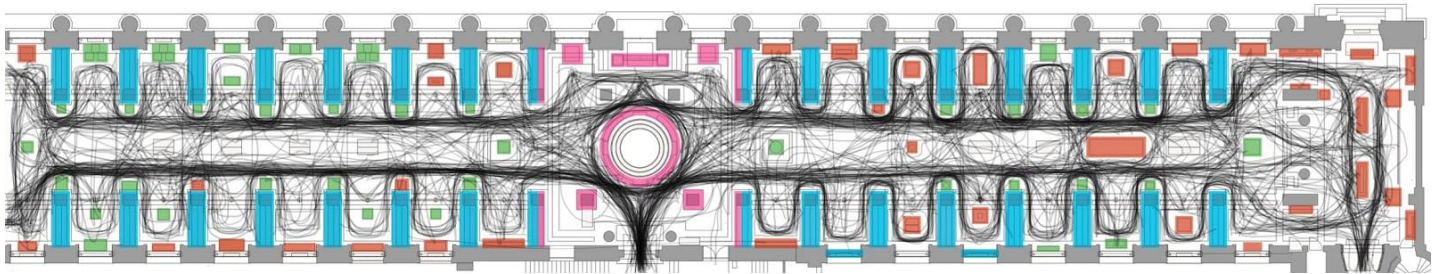
Figure 22: Visitor Trace Map
(Source: Trace Maps)

From the recorded dwell times per visitor tracked, we have created an overall visitor heat map (Figure 23). Each circle represents a bay or object in the gallery. This heat map shows that the China side is more popular since the circles are bigger in size and warmer in color. On the top right, the three adjacent red circles represent "Qing," "Late Ming," and "Early Ming," which are the most popular bays in the gallery. In fact, a summary of the most popular bays (Appendix H) and objects (Appendix I) are represented through Tables 2, 3, 4, and 5. We based popularity on two individual factors: (1) most visited and (2) longest dwell times. Those bays or objects with longer dwell times were termed as 'most engaging' while those bays or objects with most visitors were termed 'most visited.' The most popular bays were further broken down into which particular cases within those bays were the most popular.
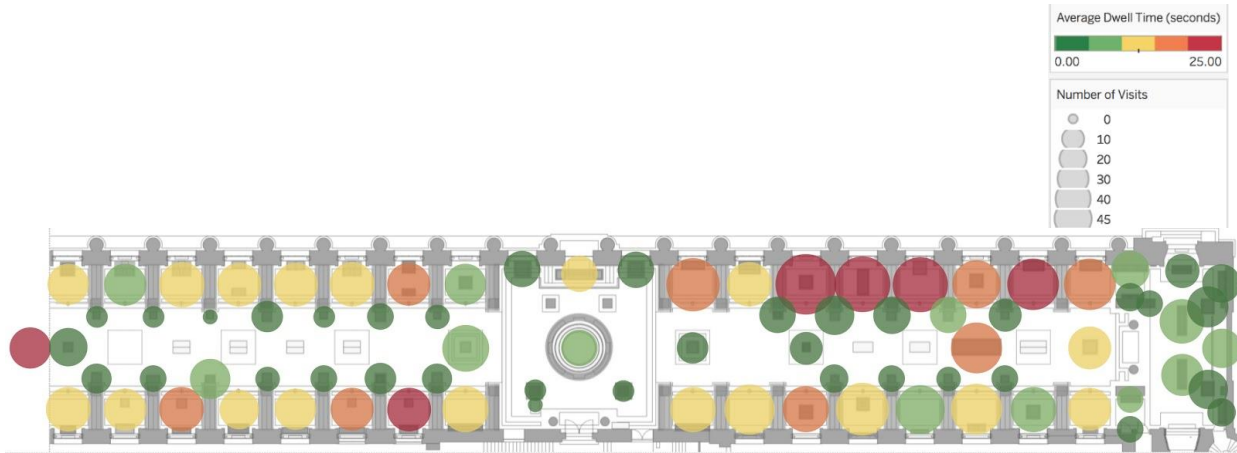
Figure 23: Visitor Heap Map

(Source: Observation Matrices)

	Rank	Bay	Case	Number of Visitors (out of 100)	Average Dwell Time Entire Bay (s)
China	1	Qing	Right	45	24
	2	Late Ming	Right	36	23
	3	Early Ming	Right	35	26
South Asia	1	South Asia	Left	21	12
	2	Deccan Region	Right	20	14
	3	Himalayas & Beyond	Left	19	17

Table 2: Most Visited Bays

(Source: Observation Matrices)

	Rank	Bay	Case	Number of Visitors (out of 100)	Average Dwell Time Entire Bay (s)
China	1	Early Ming	Right	35	26
	2	Qing	Right	45	24
	3	Late Ming	Right	36	23
South Asia	1	British Period	Left	18	23
	2	Himalayas & Beyond	Left	19	17
	3	Early History (tie) Princes & Poets	Right and Left	17 (each)	16

Table 3: Most Engaging Bays

(Source: Observation Matrices)

	Rank	Object	Number of Visitors (out of 100)	Average Dwell Time (s)
China	1	Tomb procession	28	16
	2	Village Entertainers	19	8
	3	Luohan	17	11
South Asia	1	Shiva Nataraja	22	6
	2	Garuda	14	9
	3	Image of Tara	12	4

Table 4: Most Visited Objects

(Source: Observation Matrices)

	Rank	Object	Number of Visitors (out of 100)	Average Dwell Time (s)
China	1	Tomb procession	28	16
	2	Luohan	17	11
	3	Thatcher Cottage in the Western Mountains	16	9
South Asia	1	Garuda	14	9
	2	Shiva Nataraja	22	6
	3	Image of Tara	12	4

Table 5: Most Engaging Objects

(Source: Observation Matrices)

As well as an overall heat map, we also created a heat map just for tour groups (Figure 24). We used the 11 observation matrices that corresponded to the 11 tour guides to create the tour group heat map. Since almost all of the tour groups in the gallery are Chinese tour groups, the tour guides only led the groups to the China side. The most popular object for the tour groups was the 'Tomb Procession,' which is a significant art piece in Chinese culture. The most popular bays for the tour groups are 'Neolithic China,' 'Early Dynasties,' and 'Painting Chinese.'

Figure 24: Tour Group Heat Map
(Source: Observation Matrices)

We were also interested in knowing if the objects marked in the British Museum audio guide made any difference to the visitor dwell times. By using a map of all the 22 audio points in the gallery (Figure 25) and comparing it to the overall heat map (Figure 22) and the tour group heat map (Figure 24), we determined that there was no correlation between any of the maps. Thus, the audio guide did not influence visitor dwell times at those highlighted objects.
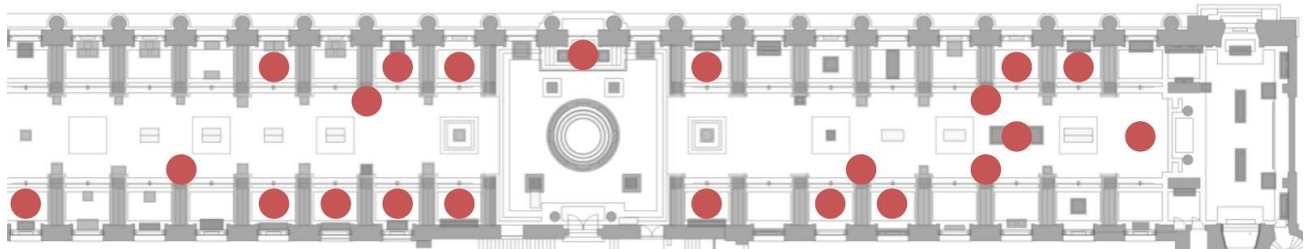
Figure 25: Audio Guide Stops
(Source: Observation Matrices)

From these heap maps, we further simplified the data into dwell time per zone (South Asia, Introduction, China) of the gallery and the range of dwell times throughout the gallery. As shown in Figure 26, the average dwell time in the China side of the galley was 5.9 minutes, the average dwell time in the South Asia side of the gallery was 4.5 minutes, and the average dwell time in the introduction zone of the gallery was 0.4 of a minute (24 seconds). The ranges of dwell times in Room 33 are depicted in Figure 27. The most massive dwell time range was between 5 to 10 minutes while the shortest dwell time could be as low as less than 5 minutes. Overall, the average dwell time in the gallery was 18 minutes. All of these times do not include the time that visitors spent walking and the time visitors spent sitting down.

37
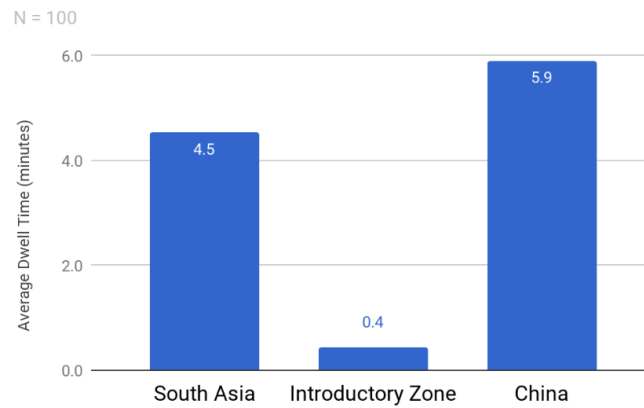
Figure 26: Average Dwell Time Per Zone (in Minutes)
**(Source: Observation Matrices)**
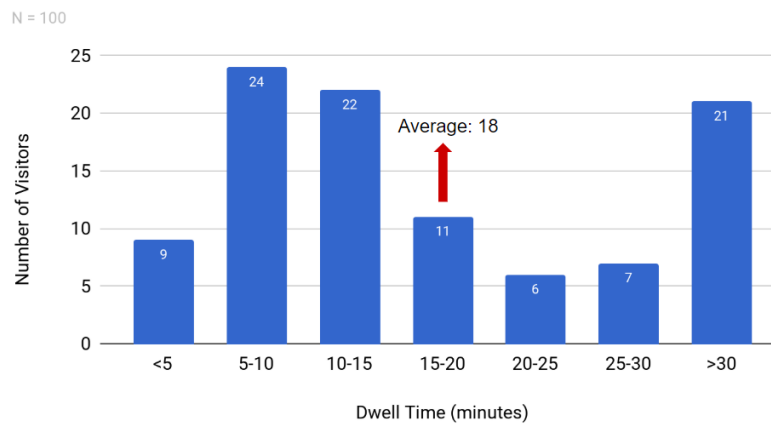
Figure 27: Ranges of Average Dwell Times in Room 33 (in Minutes)
(Source: Observation Matrices)

The remaining results that we will discuss are results taken from the visitor exit surveys. To clarify, these questions are similar to those questions asked in the Summative Room 41 Evaluation of the Early Medieval Europe Gallery. The first question we asked visitors was if their visit was their first time at the British Museum. If this was not the visitor's first time at the museum, we asked one more question to specify when their last time at the museum was. Out of those 100 visitors surveyed, 71 said it was their first time at the British Museum while the remaining 29 had either been to the museum between the last year to five years ago (Figure 28).
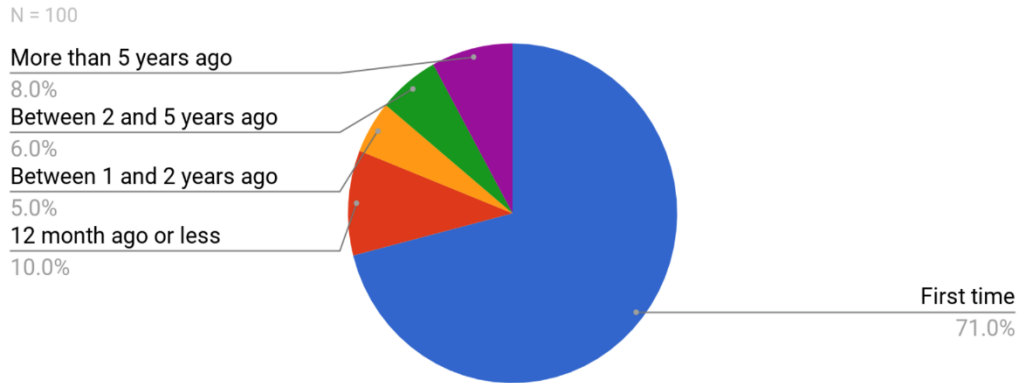
Figure 28: Visitor Previous Visits
(Source: Visitor Exit-Surveys)

We then asked visitors for their general reason for coming to the museum (Figure 29). The response to this question demonstrated that 87% of visitors came to the British Museum for a general visit while only 8% came to see a specific gallery or exhibit. The remaining 5% either showed up to meet with friends or had other reasons. To dive deeper into the primary motivations of why visitors came to the British Museum, we also provided a list of 17 top reasons which explain why visitors typically visit the museum. Visitors received a chance to select any of those answers that best applied to him or her. Figure 30 summarizes their responses. Similarly, visitors chose their main experiences in Room 33 (Figure 31).
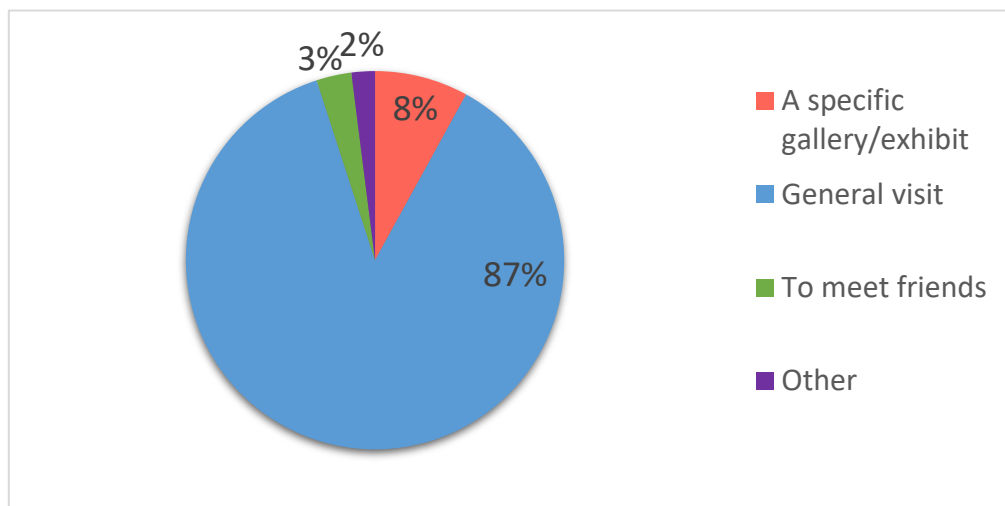
Figure 29: Visitor General Reasons for Coming to the British Museum
(Source: Visitor Exit-Surveys)
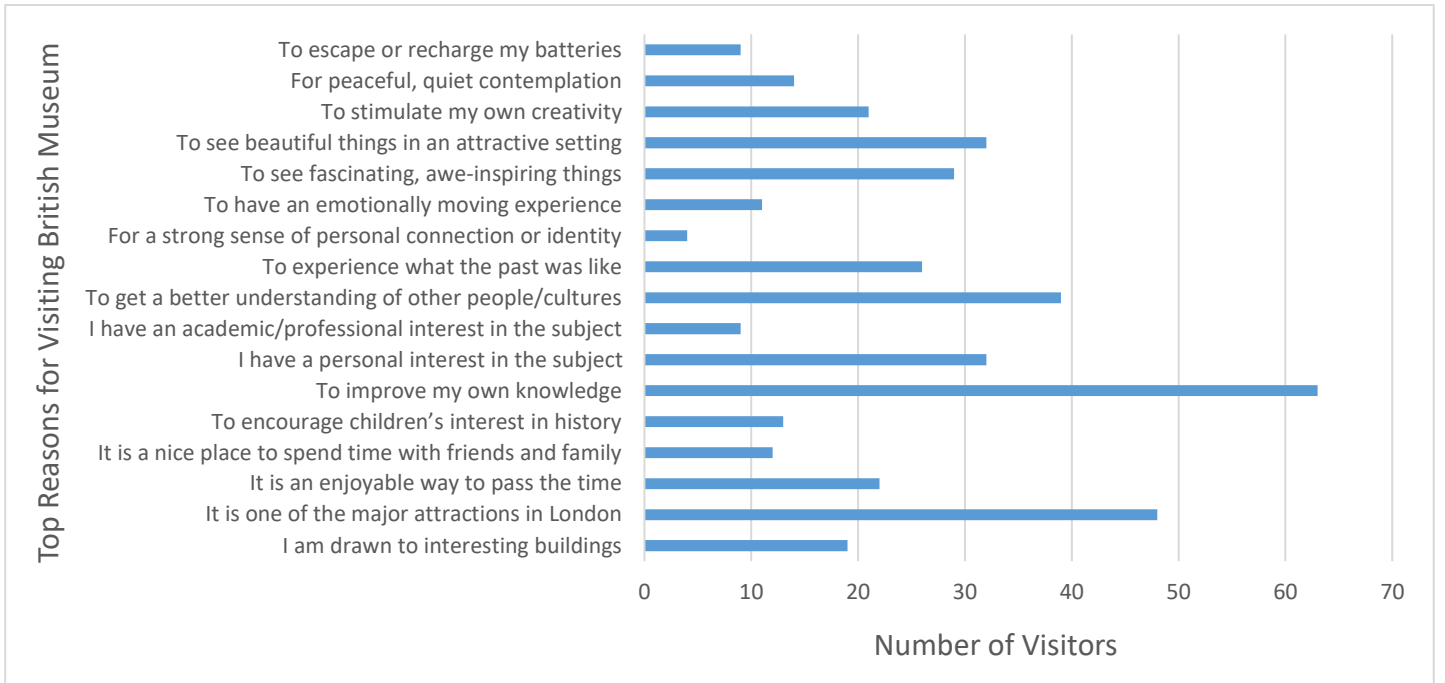
Figure 30: Visitors' Top Reasons for Visiting the British Museum

(Source: Visitor Exit-Surveys)
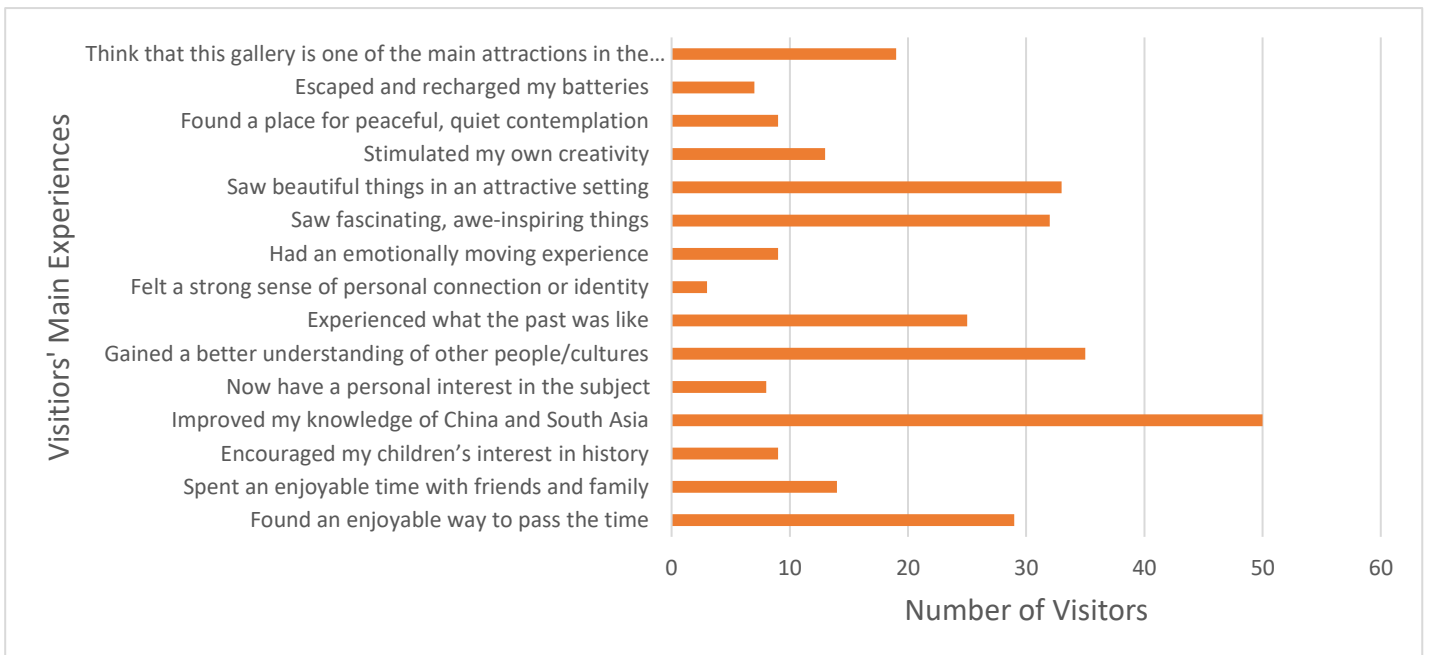
Figure 31: Visitors' Main Experience in Room 33

(Source: Visitor Exit-Surveys)

In addition to visitor motivations for coming to Room 33, it was important to make a distinction between whether or not the visitor intended to visit the gallery. As Figure 32 depicts, most visitors (72%) did plan to visit the gallery while only a few (28%) wandered in.

N = 100
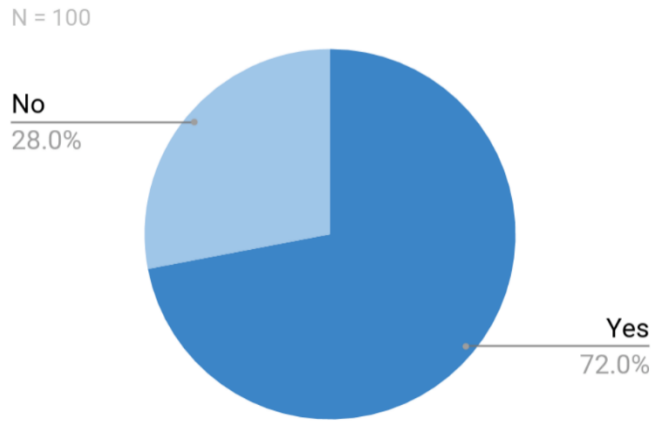
Figure 32: Visitors' Intention to Visit Room 33
(Source: Visitor Exit-Surveys)

The next couple of questions focused on the labels throughout the gallery. After asking visitors for their rating on how easy it was to match the text descriptions to the objects (Table 6), most rated the task as 'good' and 'excellent.' On the contrary, only a few visitors said that the task of matching descriptions to objects was 'poor.' This question was followed up with the question of whether or not the visitor would like to know more about the objects or displays. Although 75 visitors said no, 25 visitors said yes and had the option to explain further. Out of the those who responded yes, only 8 filled out the free-response. In summary, their answers showed that they wanted to see more about war, Yuan and Ming blue and white pottery, Buddhist deities, and the fusion of bone in Buddhism. They also wanted further clarification as to how objects ended up in possession of the British Museum.

Ratings	Number of Visitors
Excellent	39
Good	47
Average	11
Fair	0
Poor	3

Table 6: Visitors' Ratings of Object Labels and Descriptions
(Source: Visitor Exit-Surveys)

Since the introduction of Chinese and Hindu quotes in the introductory bay panels was a major change that occurred in the redisplay of Room 33, we had two questions dedicated to finding out the success of those quotes. The first question asked if visitors noticed the quotes. If a visitor answered yes, they then had an option to answer another question which asked if the quotes were captivating. For the first question, there was an almost half and half divide in the responses (Figure 33). As for the 51 visitors who did notice the quotes, only 90% said that the quotes captivated them. For those who weren't captivated by the quotes, they suggested that the quotes be automated (like a voice reading the quotes) to make them more engaging.

N = 100

No
49.0%

Yes
51.0%
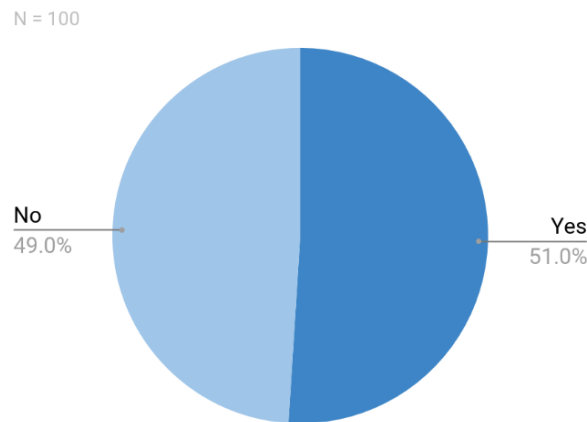
Figure 33: Half of Visitors Noticed Quotes
(Source: Visitor Exit-Surveys)

The last several questions were free responses to gauge the overall opinions that visitors had on Room 33. These questions asked for the impression that the visitor had of China and South Asia and if the visitor had any other comments about the gallery or displays. To best display visitors' answers, we created a word cloud for each of the questions. What a word cloud does is take all of the responses and shows the most reoccurring words in big and bright letters in the center, while other less common words are not as emphasized.

For the word cloud showing the impression that visitors had of Room 33 (Figure 34), the words that stand out the most are "history," "culture," and "interesting." Moreover, one visitor said that their impression of China and South Asia was "ancient and modern history altogether." Since one of the changes that occurred in the redesign of Room 33 was that the content in the gallery was brought up to more present day, we believe this change has helped visitors

understand more profoundly both South Asia's and China's history. However, one of the visitors suggested that the gallery should try to make overlapping themes about the cultural contents that both South Asia culture and China culture share. For example, the visitors are keen to know more about the spread of Buddhism in the Asia region. Overall, the visitors were satisfied with the richness and education value provided through Room 33.

Figure 34: Visitors' Impressions of the Gallery
(Source: Visitor Exit-Surveys)

The next word cloud portrays all of the visitors' general comments about the gallery or any suggestions that they had to improve Room 33 (Figure 35). Immediately the words that stand out are "Chinese," "label," "description," and "interactive." In fact, after reading through all of the responses, we found that visitors wanted Chinese labels or descriptions added to the gallery. Again, this makes sense because the majority of Room 33 visitors are Chinese. As for "interactive," visitors want more digital interactives besides the three already in place. One visitor, in particular, suggested that the British Museum use the Victoria & Albert (V&A) Museum of London as an example of how it incorporates digital interactives into its displays. Lastly, one important remark was that visitors wished the gallery was more "accessible."

Figure 35: Visitors' Comments for Improvements
(Source: Visitor Exit-Surveys)

Speaking about accessibility, the last questions of our exit-surveys were specifically designed to receive the opinions of the Deaf and disabled community. If a visitor selected no or prefer not to answer the question of whether they considered themselves as Deaf, disabled, or less able to stand, the survey ended, and no further questions were asked. However, if visitors chose yes, they were taken to a set of separate accessibility questions. Due to the scarcity of the Deaf and disabled community in the gallery and those unwilling to identify, only three visitors answered the accessibility questions.

These three individuals identified as Deaf, deafened, or hard of hearing, disabled, and blind or partially sighted. Before visiting the British Museum, these visitors said that they all went to the museum website to check their options. However, they had mix responses as to whether or not the information on the "what's on" page and map information on the website was useful and accessible (Figure 36). As well as visiting the website before their visit, 2 out of 3 visitors also discussed with the visitor services. Upon arriving at the British Museum, they made use of the audio guide, fold-up seating, and their own devices as a zooming mechanism for reading the text. We also asked how easy it was to get around Room 33 and the museum as a

whole. Only one person said that getting around was "easy" while the other two said it was "hard." Similarly, those two people said that they were only able to find Room 33 with a lot of help. As for finding and being able to read the labels around the gallery, one visitor said that it was impossible. This visitor was the individual who identified as blind or partially sighted. To improve the label accessibility, this visitor recommended two things: (1) that there be better audio descriptions on the audio guide of what the objects look like, and (2) that the numbers on those objects associated with the audio guide be significantly bigger or of a brighter color. Regarding the theme and layout of Room 33, all three visitors did find that both of those aspects helped make their experience more comfortable.
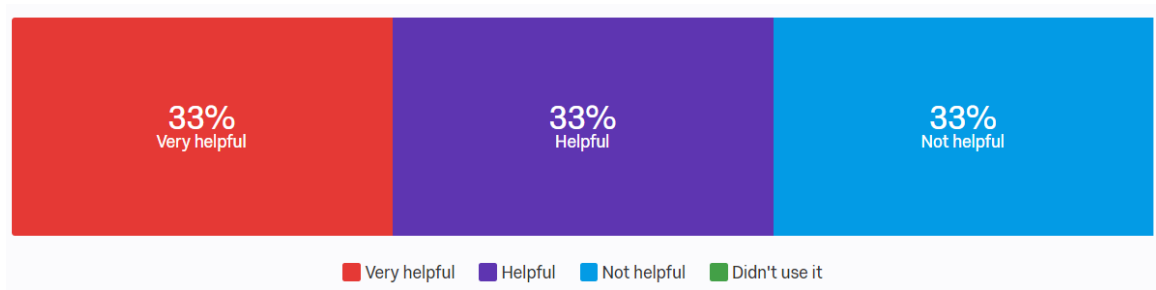
Figure 36: Accessibility Rating of British Museum Website
(Source: Visitor Exit-Surveys)

Chapter 5: Conclusion and Recommendations

5.1 Conclusion

In the old gallery, visitors engaged randomly, ignored the panels on the walls, and stopped at random objects where they would pick at random pieces of information. Also, visitors would spend a lot of time looking down and inside of the oculus at the floor below Room 33. For old galleries, the dwell time of visitors was found to be typically around 3.5 minutes. To correct this behavior, the new redesign of Room 33 added a chronological flow throughout the gallery, changed the labels and panels around the gallery, introduced gateway objects into the bays, and added timelines of China and South Asia history around the oculus. By comparing our overall data to the information that our sponsor, Stuart Frost, provided about how visitors behaved in the original design of Room 33, we were able to determine many improvements in visitor behavior that occurred from the re-display of the gallery.

One improvement was evident in how visitors walked through the gallery. Instead of randomly engaging in the gallery, more than half of visitors now followed the chronological flow of the bays. Moreover, inside of the bays, three-fourths of the time the gateway objects successfully attracted visitors. Furthermore, visitors spent less time near the oculus and more time in the actual gallery space. Compared to the typical average dwell time found in smaller galleries at the British Museum, the average dwell time in Room 33 was 18 minutes. This dwell time does not include the time visitors spent sitting down on benches or walking throughout the gallery. Although only one-third of visitors read labels and panels, we believe this occurred because a majority of the visitors were Chinese and could not understand English.

Overall, the changes that were made in the redisplay improved the quality of the visitor experience. From visitor comments, visitors seemed very pleased with the redesign of the gallery and only had minor suggestions on how to further improve the gallery. Using the visitor comments in combination with our data and observations of visitor behavior, we have outlined some recommendations (Section 5.2) for the British Museum on how to improve the China and South Asia gallery.

5.2 Recommendations

From our extensive data collection, we were able to make several recommendations to the British Museum. One of our recommendations is to include labels in Chinese in addition to the English labels that are already present in the gallery. Since a majority of the visitors of Room 33 are Chinese, the visitors repeatedly suggested that labels in Chinese be added because English was not a strong language for many. These labels do not have to be physically mounted on the cases but could be added via a QR code so that visitors can access the information on their own devices. These QR codes also provide an opportunity to have object descriptions in multiple languages.

A second recommendation that was taken from visitor comments is to clarify how the British Museum gained possession of the objects. Visitors come into the gallery with a pre-set view of imperialism and, as a result, have negative connotations about the British Museum. For example, some of the visitors expressed concern that the objects on display might have been "taken" or even "stolen" by the British so that they could be put on display at the British Museum. Thus, we believe that addressing the origins of objects on the labels themselves would help clarify some of the visitors' questions.

Our team also recommends that Room 33 add more guided audio stops and improve the usability of the audio guide. Currently, the gallery only has 22 stops, but we believe that at least every gateway object has an audio stop. Concerning accessibility, a lot of users found it difficult to use the audio guide. We also had a few visually impaired visitors that suggest that there be more audio descriptive guide stops. In addition to these descriptions, the audio guide numbers on the cases of the objects need to be available in braille and a larger font. Furthermore, the large print guides which we know are on the way, need to be readily available for those visitors who are visually impaired.

Our next group of recommendations relates to visitors who are less able to stand. For those visitors who are in wheelchairs, the elevator to take handicap visitors to Room 33 was frequently out of service. Therefore, a number of wheelchair users or visitors with other disabilities did not have access to the gallery floor. Additionally, the automatic door-openers in the Amaravati Gallery did not open with the push of the handicap button. This confused several visitors, making them think that they were stuck in between the clear doors leading to and from the Amaravati Gallery.

Another recommendation is made from the trace map (Figure 22). The area around the oculus that faces the main entrance has darker and more prominent lines than the remaining area surrounding the oculus. This means that the timelines put in place are currently being ignored. A suggestion then is to move these timelines closer to the main entrance where they are most noticeable. Moreover, since that area of the oculus is also a place where tour groups organize, it will let those visitors look at the timelines while the group settles down.

Finally, it was evident from our word cloud (Figure 35) that many visitors wanted to see more digital interactive displays in the gallery. Currently, there are only three interactive displays, but visitors believe that by introducing more digital interactives, the gallery can become more lively and engaging. One visitor in specifically suggested that the British Museum look at the galleries in the Victoria and Albert Museum as an example. Other visitors also suggested that an automatic voice read the quote on the panels of the introductory bays. This voice will help captivate visitors by making them feel as if they are part of the history of China and South Asia.

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Appendices

Appendix A: Timeline for Completing Tasks

Date / Objectives/Tasks	MAY — Week 1 (7,8,9,10,11,12,13)	Week 2 (14,15,16,17,18,19,20)	Week 3 (21,22,23,24,25,27,28)	Week 4 (29,30,31)	JUNE — Week 4 (1,2,3,4)	Week 5 (5,6,7,8,9,10,11)	Week 6 (12,13,14,15,16,17,18)	Week 7 (19,20,21,22,23,24,25)
Identify Best Practices				x				x x
Desk-based background research	████	████	████					
Set up interviews with museum experts							████	
Conduct interviews with museum experts							████	
Clarify the British Museum Goals and Protocols								
Review internal BM documentation	████							
Set up interviews with Sponsor				███	████	████		
Conduct interview with Sponsor				███	████	████		
Evaluate Visitor Behavior								
Develop visitor observation, tracking, and interview protocols	████	████						
Pre-test tracking, observation, and exit interviews	████							
Implement tracking, observation, and exit interviews								
Analyze data						████	████	████
Prepare Project Report and Presentation						████	████	████

Appendix B: Script for Interviews with Other Experts

Preamble: Thank you for agreeing to participate in our interview. We are researching with the British Museum to evaluate the redisplay of their South Asian and Chinese collection. We are particularly interested in the use of gateway objects to improve wayfinding.

Do you mind if we record this conversation? We would like to quote you in our final report if you don't mind. We will, of course, give you an opportunity to review the materials before we publish.

1. What is your title?
2. How much experience do you have in your area of expertise? What is it?
3. Our sponsor, Stuart Frost, who is head of the Interpretation Team at the British Museum provided us with the basic facts on the gateway-object approach. This includes [will list a few facts about gateway objects]. What else can you tell me about gateway objects?
4. Do you believe that gateway objects are important? Why?
5. How are gateway objects connected to visitor wayfinding? Can you explain wayfinding?
6. When choosing a gateway object, is it better to choose gateway objects that are inherently attractive (e.g., large, visually stunning) or gateway objects that are culturally significant even if they are less visually attractive?
7. How effective do you think gateway objects are in conveying their purpose?
8. Are there any flaws with using the gateway-object approach?
9. Are there any improvements you can suggest for the criteria of gateway objects?
10. Are there certain places in a museum that gateway objects should or should not be used? Can you provide examples and your reasoning?
11. What advice, if any, can you offer the British Museum in the usage of gateway objects for their galleries?
12. Is there anyone else you can refer us to that can help us get more information on this subject? If yes, who?

Thank you for your time! Your information will help us better address our project goal. If you would like to receive a copy of our final project report, please provide your email address. Also,

if you remember later on that you forgot to provide us with any information, feel free to email us at bm-18e1@wpi.edu.

Appendix C: Script for Interviews with British Museum Staff

Preamble: Thank you for agreeing to participate in our interview. We are researching with the British Museum to evaluate the redisplay of their South Asian and Chinese collection. We are particularly interested in the use of gateway objects to improve wayfinding.

Do you mind if we record this conversation? We would like to quote you in our final report if you don't mind. We will, of course, give you an opportunity to review the materials before we publish.
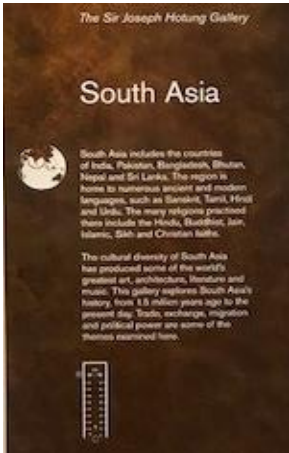
1. What is your job title?
2. How long have you been working at the British Museum?
3. Did you hold a role in the designing process for the original display of Room 33? If yes, what was it?
4. Did you get a chance to look through the visitor evaluation data collected from the display? If yes, you might have noticed that evaluation showed that the gallery did not engage the visitors as the gallery designers intended them to. For example, [will list one or two examples]. Are there any other things you noticed that this first design missed?
5. Now, did you hold a role in the designing process for the re-display of Room 33? If yes, what was it and what things did you change? Why?
6. Are you familiar with the gateway object? From readings provided by Stuart Frost, the head of Interpretation, we were able to determine that gateway objects are used to [insert a few facts here]. Can you tell me more about gateway objects?
7. When choosing a gateway object, is it better to choose gateway objects that are inherently attractive (e.g., large, visually stunning) or gateway objects that are culturally significant even if they are less visually attractive?
8. Could you imagine another way that Room 33 could have been redesigned without the use of gateway objects? If yes, what would it be?
9. Now the re-presented gallery has been open for a couple of months, are there any improvements you have noticed about visitor engagement in the gallery? Are there any problems you can still identify? What are they?

10. Since we will be the first group to evaluate visitor behavior in this new redesign of the China and South Asia gallery, are there any things in particular that you want our evaluation to address? What are they?

11. Is there anyone else you can refer us to that can help us get more information on this subject? If yes, who?

Thank you for your time!

Appendix D: Labeled Objects from Gallery Templates
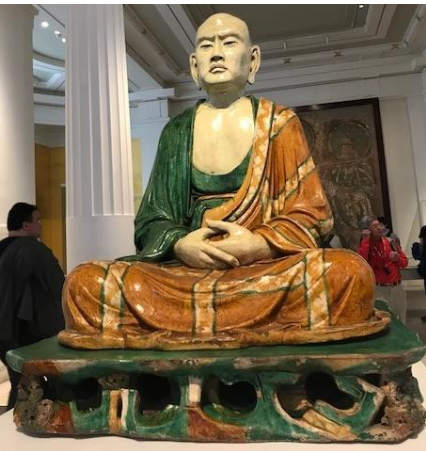
Number on Map	Label Name	Picture of Object
		Introduction Zone
O1	Ganesha	
O2	Glazed dragon tiles & Cloisonné incense burners	
O3	Stoneware figure of Budai	

O4	China Introduction Panel	
O5	South Asia Introduction Panel	
O	Oculus	
H	Hands on	

China Side		
C1	Incense burner	
C2	Cloisonné mandala	
C3	Bronze *bo* bell	
C4	Sandstone Buddhist stele	

C5	Sandstone figure of Bodhisattva Avalokitesvara (Guanyin)	
C6	Tomb procession	
C7	Bullock cart	
C8	Luohan discovered in Yixian northeastern China	

C9	Thatcher Cottage in the Western Mountains, Tang Yin (1470-1524)	
C10	Painted wooden figure if the Bodhisattva Guanyin	
C11	Portrait of a Buddhist Priest	
C12	Mysterious Woman of the Nine Heavens	

C13	Devotional painted wooden image of Guanyin	
C14	Village Entertainers, Wu Wei	
C15	Fishermen in a River Gorge, Zhu Bang (active 1522-66)	
C16	Bodhisattva Manjushri	

C17	Birds and Bamboo against the Wind & Swallows and Plum Blossoms	
C18	Couplet in Semi-cursive Script, Pu Ru & What a Family!, Sa Benjie (born 1948) & interactive about painting	
C19	Gilt-bronze head of a Buddhist guardian figure	
C20	Cloisonné jar and cover	

C21	Figure on an assistant to the judge of hell	
C22	Figure on an assistant to the judge of hell	
C23	Musical, automation table clock	
South Asia		
S1	Shiva Nataraja	

S2	Mathura lion capital	
S3	Stone sculpture of the preaching Buddha	
S4	Sandstone sculpture of a *tirthankara*	
S5	Marble temple pillar	
S6	Stone sculpture of the *tirthankara* Chandraprabhu	

S7	Shiva dakshinamurti	
S8	Yogini	
S9	Image of Tara	
S10	The fierce goddess Chamunda	

S11	Vajrasattva	
S12	Garuda	
S13	'Alam	

S14	Hanuman	
S15	The goddess Kali	
S16	*Night Bloom II* by Mrinalini Mukherjee	

Appendix E: Observation Matrix

Visitor No.	Observer Name	Time In (HH:MM PM)	Time Out	Turn which side	Gender	Using BM guide			
Entrance	Group composition	Refuse Survey	Viewing Strategy	Using audio guide					
	Chronological		Total Time						
Object	Dwell Time (mm.ss)	Objects looked at first	L time	C time	R Time	Read labels	Took photos	Discussed with Others	Returned
INTRO									
O1									
O2									
O3									
Oculus									
H (Hands-on desk)									
O4 (China panel)									
O5 (South Asia panel)									
Bay	Dwell Time (mm.ss)	Objects looked at first	L time	C time	R Time	Read labels	Took photos	Discussed with Others	Returned
CHINA									
Neolithic China									
Early dynasties									
Zhou									
Qin & Han									
Buddhism in China									
Silk Roads									
Tang									
Chinese Painting									
Writing Chinese									
Song									
Yuan									
Early Ming									
Late Ming									
Qing									
China & the West									
Modern China									
Object	Dwell Time (mm.ss)	Objects looked at first	L time	C time	R Time	Read labels	Took photos	Discussed with Group M	Returned
C1									
C2									
C3									
C4									
C5									
C6									
C7									
C8									
C9									
C10									
C11									
C12									
C13									
C14									
C15									
C16									

Bay	Dwell Time (seconds)	Objects looked at first	L time	C time	R Time	Read labels	Took photos	Discussed with Group M	Returned
C17									
C18									
C19									
C20									
C21									
C22									
C23									
G									
I									
B									

Bay	Dwell Time (seconds)	Objects looked at first	L time	C time	R Time	Read labels	Took photos	Discussed with Group M	Returned
South Asia									
Amaravati									
Early societies									
Early History									
Gandhara									
Gupta period									
West & Central India									
Deccan region									
South India									
Sri Lanka									
Odisha									
Eastern India									
Himalayas & beyond									
The Northwest regions									
Sultans & Mughals									
Princes & poets									
British period									
South Asia									

Object	Dwell Time (mm.ss)	Objects looked at first	L time	C time	R Time	Read labels	Took photos	Discussed with Group M	Returned
S1									
S2									
S3									
S4									
S5									
S6									
S7									
S8									
S9									
S10									
S11									
S12									
S13									
S14									
S15									
S16									

Appendix F: Visitor Exit Survey Questionnaire (English)

Visitor Exit Survey at Room 33

Preamble: This is a visitor evaluation survey in collaboration with the British Museum. Would you be willing to take 5 minutes to answer a few questions about your experience in the gallery? The survey is anonymous and you can skip any question or end it at any time. Thank you.

Q1 Is this your first visit to The British Museum?

- Yes
- No

Display This Question:

If Is this your first visit to The British Museum? = No

Q2a How long ago was your last visit?
- 12 months ago or less
- Between one and two years ago
- Between two and five years ago
- More than five years ago

Display This Question:

If How long ago was your last visit? = 12 months ago or less

Q2b Including today, how many times have you visited in the past 12 months?
- 1
- 2
- 3
- 4
- 5
- more than 5 times

Q3 What was your reason for coming to the museum today?

- To see a specific gallery or exhibit. If so, which one? _____
- A general visit to the museum
- Attend a talk, tour, or special event
- To visit the shop
- To visit the café
- To meet friends
- Other _____

Q4 Did you intend to visit this gallery?

- Yes
- No

Q5 How easy was it to match the label text to the object?

- Excellent
- Good
- Average
- Fair

- Poor

Q6 Is there anything more you would like to know about these objects or displays?

- Yes. I would like to know more about: _____
- No

Q7a Did you notice the quotes above each case?

- Yes
- No

Q7b Did they captivate you?
- Yes
- No, why? _____

Q8 What impression of China and South Asia did you get from this gallery?

 _____

Q9 Here are some of the top reasons that visitors attend the British Museum. Have a look down the list and select those which apply to you.

- I am drawn to interesting buildings
- It is one of the major attractions in London
- It is an enjoyable way to pass the time
- It is a nice place to spend time with friends and family
- To encourage children's interest in history
- To improve my own knowledge
- I have a personal interest in the subject
- I have an academic/professional interest in the subject
- To get a better understanding of other people/cultures
- To experience what the past was like
- For a strong sense of personal connection or identity
- To have an emotionally moving experience
- To see fascinating, awe-inspiring things
- To see beautiful things in an attractive setting
- To stimulate my own creativity
- For peaceful, quiet contemplation
- To escape or recharge my batteries

Q10 Which of these would you say was your main experience?

- Found an enjoyable way to pass the time
- Spent an enjoyable time with friends and family
- Encouraged my children's interest in history
- Improved my knowledge of China and South Asia
- Now have a personal interest in the subject
- Gained a better understanding of other people/cultures
- Experienced what the past was like
- Felt a strong sense of personal connection or identity
- Had an emotionally moving experience
- Saw fascinating, awe-inspiring things

- Saw beautiful things in an attractive setting
- Stimulated my own creativity
- Found a place for peaceful, quiet contemplation
- Escaped and recharged my batteries
- Think that this gallery is one of the main attractions in the Museum

Q11 Do you have any other comments about the gallery or displays here? Any suggested improvements?

_____

Q12 What is your gender?

- Male
- Female
- Other

Q13 What age group do you fall into?

- 18-24 years
- 25-34 years
- 35-44 years
- 45-54 years
- 55-64 years
- 65+ years
- Prefer not to answer

Q14 What is your nationality?

_____

Q15 Who are you here with?

- Alone
- Family
- Friends
- School Party
- Organized group

Q16a Do you consider yourself to be Deaf, disabled, or less able to stand?

- Yes
- No
- Prefer not to say

Display This Question:

If Do you consider yourself to be Deaf or disabled? = Yes

Q16b During your visit did you use any of the following? :
- Large print book
- Magnifiers
- Audio guide
- BSL guide
- Seating
- Fold up seating
- Wheelchair
- Hands on desk
- Your devices for taking photographs - zooming in for detail

- Other: _____

Q16c How easy was it to get around the building and Room 33?
- Very easy
- Easy
- Moderate
- Hard
- Very hard

Q16d Were you able to find object labels and read them?
- Yes
- Most of them
- Some of them
- No

Q16e The theme and layout were presented in a helpful way?
- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

Q16f Were you able to find room 33?
- Yes
- Yes, but with some help
- Yes, but with a lot of help

Q16g Did you have conversations with visitor services?
- Yes
- No

Q16h Did you visit the website before visiting?
- Yes
- No

Q16i Were the "what's on" page and map information on the website useful and accessible to you?
- Very helpful
- Helpful
- Not helpful
- Didn't use it

Q16j Do you have any suggested improvements on the accommodations?

_____

Q16k Do you consider yourself to be Deaf or Disabled and other options:
- Deaf, deafened, hard of hearing
- Disabled
- Blind or partially sighted
- Wheelchair user
- Mobility impairment
- Mental health
- Learning disability
- Prefer not to say

Thank you for taking the time to complete this survey. We truly value the information you have provided.

Appendix G: Visitor Exit Survey Questionnaire (Chinese)

大英博物馆中国与南亚展馆游客体验问卷调查

Preamble 您好， 我们在为大英博物馆做游客体验的研究。请问您愿意抽出五分钟回答一些关于本次浏览体验的问题吗？这是一份匿名问卷，您可以跳过任何问题或随时终止回答。感谢您的配合！

Q1 这是您首次参观大英博物馆吗？

- 是的
- 不是

Q2a 您上次参观大英博物馆是什么时候？
- 一年之内
- 一年到两年之前
- 两年到五年之前
- 五年之前

Q2b 包括今天，您在一年内参观过几次大英博物馆呢？
- 1
- 2
- 3
- 4
- 5
- 5次以上

Q3 您今天来参观博物馆的目的是？

- 来参观某个特定的展馆或者展品，**例如**：　_____
- **普通参观**
- **参加演**讲，官方游览，特殊活动
- **礼品店**购物
- **餐厅用餐**
- **和朋友**见面
- **其他**

Q4 参观本展馆是否在您今天的计划之内？

- 是
- 否

Q5 您觉得展品的描述清楚吗

- 很清楚
- 清楚
- 一般
- 有待提升
- 不清楚

Q6 您对展品有想要更深入的了解吗？

- 是的，我想了解: _____
- 否

Q7a 您注意到了展柜上方类似这样的名言吗？

- 是
- 否

Q7b 您喜欢这些名言吗？

- 喜欢
- **不喜**欢，原因是： _____

Q8 通过本次参观，您对中国和南亚有什么新的认**知**

_____

Q9 以下哪些是您这次参观大英博物馆想要获得的体验（参观原因）？

- 对大英博物馆的建筑感兴趣
- 这是伦敦的主要景点
- 这是消磨时间的好方式
- 这是陪伴家人朋友的地方
- **培养孩子**对历史的兴趣
- **增**长个人见识
- **个人**兴趣爱好
- **学**术兴趣爱好
- **想了解其他文化/人物**
- **体**验过去的生活
- 寻求个人的身份
- **追求令人感**动的事物
- 参观令人敬畏的历史人物/**事件**
- **追求美的事物**
- **激**发个人的创造力
- 寻求安静的思考
- 为个人充能

Q10 以下哪些是您这次参观中国和南亚展馆最终获得的体验？

- **找到了消磨**时间的好方式
- **和家人朋友度**过了愉快的时光
- **激**发了我的孩子对历史的兴趣
- **增**长了对中国和南亚的知识

- 现在有了个人兴趣
- **更多地了解了其他文化/人物**
- **体**验了过去的生活是什么样子的
- **感受到了强烈的个人认同感**
- **深受感动**
- **看到了令人敬畏的人物/**历史
- **感受到了美**
- **激**发了个人创造力
- **找到了一个能静心思考的地方**
- 给自己放松充电
- 觉得本展馆是大英博物馆的主要展馆之一

Q11 您还有对本展馆的其他建议吗？或者有什么我们能改进的？

_____

Q12 您的性别是？

- **男**
- **女**
- **其他**

Q13 **您属于以下哪个年龄段？**

- 18-24 岁
- 25-34 岁
- 35-44 岁
- 45-54 岁
- 55-64 岁
- 65+ 岁
- **不便透露**

Q14 您的国籍是？

_____

Q15 您是和谁一起来参观的？

- **自己**
- **家人**
- **朋友**
- **学校**组织
- **其他**团体

Q16a 您是否行动不便或者有试听障碍？

- **是**
- **不是**

- **不便透露**

Q16b 在您的参观过程中，请问您使用了以下哪些辅助工具？
- **大字体指南**
- **放大镜**
- 音频解说导游
- 英文手语导游
- **休息座位**
- **折叠座椅**
- 轮椅
- 亲身体验活动
- **具有拍照及放大功能的**电子设备
- **其他：** _____

Q16c 您觉得在博物馆中行动是否方便？
- **非常方便**
- **方便**
- **一般**
- **不方便**
- **非常不方便**

Q16d 您可以找到展品的标签并阅读他们吗？
- **可以**
- **能找到大部分**
- **能找到一些**
- **不能**

Q16e 本展馆的布置是否方便您游览？
- **十分同意**
- **同意**

- 中立态度
- 不同意
- 强烈不同意

Q16f 您能找到本展馆吗？
- 能
- 能，但需要一些帮助
- 能，但需要很大帮助

Q16g 您和大英博物馆的游客服务有过交流吗？
- 有
- 没有

Q16h 您在来参观之前浏览过大英博物馆的官方网站吗？
- 有
- 没有

Q16i 网站上的地图信息及其他信息对您有帮助吗？
- 非常有帮助
- 有帮助
- 没有帮助
- 没有看到这些信息

Q16j 您对大英博物馆对辅助设施有什么建议吗？

_____

China

Q16k 下面列出的哪些情况符合您？
- **听力障碍**
- **残疾**
- 视力障碍
- 轮椅使用者
- 行动不便
- **心理障碍**
- 学习障碍
- **不便透露**

非常感谢您抽出宝贵的时间来填写我们的问卷，特此对您的参与和帮助致以衷心感谢！

d

Appendix H: Most Popular Bays in Room 33

Qing	Entire Bay	
	Right Case	

| Late Ming | Entire Bay | |
| | Right Case | |

Early Ming	Entire Bay	
	Right Case	
South Asia		

South Asia	Entire Bay	
	Left Case	

Deccan Region	Entire Bay	
	Right Case	

	Entire Bay	
Himalayas & Beyond	Left Case	

| British Period | Entire Bay | |
| | Left Case | |

Early History	Entire Bay	
	Right Case	
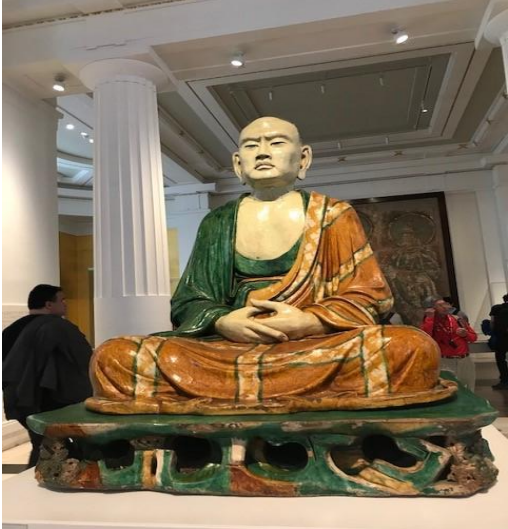
Prince & Poets	Entire Bay	
	Left Case	

Appendix I: Most Popular Objects in Room 33

Name of Object on Label	Object Picture
China	
Tomb procession	
Village Entertainers	
Luohan	
Thatcher Cottage in the Western Mountains	

South Asia
Garuda
Shiva Nataraja
Image of Tara