The Model of Interface Design Roles on Visitor Experiences towards Museum Exhibition

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ABSTRACT— *Current trends reveal a shift in the role of museums from a traditional conservation role into one with educational responsibility for enhancing visitors' learning experience. This trends moreover have raised concerns in the museum exhibition studies with reflecting to the role of technology today which enables museum visitors to be more actively create their own knowledge. However, there is a concern that excessive interface design of the museum exhibition may distract the original purpose of museums. This article deliberates the role of interface design on museum exhibition design and its contribution to interpretation of museum visitors. By examining the case of the National Museum of Malaysia, this article considers the designers' creative role in connecting with the needs of potential museum visitors to reshape both the institution of the museum and visitors' experience. This article concludes with a proposed frameworks and descriptions of interface design as a guide to the exhibition design process in museums, and for those who seek to bridge the gap between expert content knowledge (museum curators and designers) and public audiences.*

Keywords— interface design, museum exhibition, design process

1. INTRODUCTION

The museum is often associated with education and artifacts. It communicates the significant message behind the collection of artifacts to evoke public awareness on the value of heritage. Traditionally, the artifacts are presented through a display for the exhibitions with printed labels. In which, visitors walk through the exhibition to look at the artifacts and are expected to stop and read on the labels. In this context, communication and learning process are assumed to be achieved when visitors spend some time reading and looking at the objects. However, a review of the relevant literature reveals the learning in the museum is primarily influenced by personal context and is driven by various motivational factors including physical setting. Visitors are now seeking on an affective experience (de Rojas & Camarero 2008). Hence, the museum is expected to be a learning and enjoyable place.

The technology used in museum exhibitions has shown tremendous result that evolved visitors' learning experience. However, the local museums in Malaysia have not taken full advantage of the technology in exhibition design (Elottol & Bahauddin 2011). Clearly, most of the exhibitions are still presented in a conventional way that offers one-way communication, which is a simple form of presentation. In example, a study conducted by Hasan (2006) on Malaysia's museums performance revealed that there is a decline in interest and attention from the general public towards the exhibitions of natural history museum in Sarawak due to the traditional methods of displaying the artifacts in the museums which have become 'unexciting'. Considering this, further study in the area of interface design is required.

2. INTERFACE DESIGN AND MUSEUM EXHIBITION RELATIONSHIPS TOWARDS VISITORS LEARNING EXPERIENCE

Historically, museums have be regarded solely as an institution of knowledge and storehouses for the preservation of cultural heritage. Museums also are important to society for archiving, documenting, preserving, and exhibiting massive collections of cultural and historical artifacts (Kamaruddin, 2019). Although museum exhibitions have changed greatly over the last century, the value of interface design to the exhibition process has, until recently, received little acknowledgement. In response to this lack of critical analysis, this article considers the shifting role of interface design on museum exhibition and design's contribution to interpretation and the entire exhibition process is significant to look more by the researchers in the area of museum studies.

The shift in the role of museums from passive exhibition to active dissemination of knowledge has resulted in the re-definition by ICOM in 2007 (ICOM 2007). Thus, museum was 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 (ICOM 2007). Therefore, each museum has its own uniqueness in the range of displays which houses different categories of exhibition or just focuses on a specific category of exhibition. In that sense, different types of museum exhibitions provide different kinds of learning experience to the visitor.

Therefore, most visitors are spending their vacations by visiting museums to experience their moment in history and culture. Commonly, when visitors discussing about their museum experiences, they will not only share what knowledge they acquire but also how they feel during the museum visit. Museum visitors also are expecting to obtain knowledge and, at the same time, to create good memories about their visiting in museum (Caldwell, 2002). In this context, the effective museums exhibition is not only related to visitors' experience, but also to the interface design role and performance. Thus, the failure of interface design of museum exhibition affects museum visitors experience.

Referring to the interface design role and performance that related to visitor experiences, museum curators and exhibition designers have looked for a better understanding not only on visitors learning experience in designing the appearance of museum exhibitions but also interface design of museum exhibition display. By considering that, museum curators and exhibition designers also needs to know that museum visitors are variety in nature which each individual person has a unique personality, different culture, different level of knowledge and education, and visitors' personal context. Hence, appearance of each exhibition should have been an ability to serving the needs of the visitors.

In summary, as shown in Figure 1 that explaining on effective museum visitor experience towards any exhibition performance is related to an effective interface design of the exhibition display, a good physical of the exhibition hall and also effective museum visitors engagement. Beside all those three aspects of factor contributing, a visitor's attention towards exhibition additionally is based on the visitor learning style.
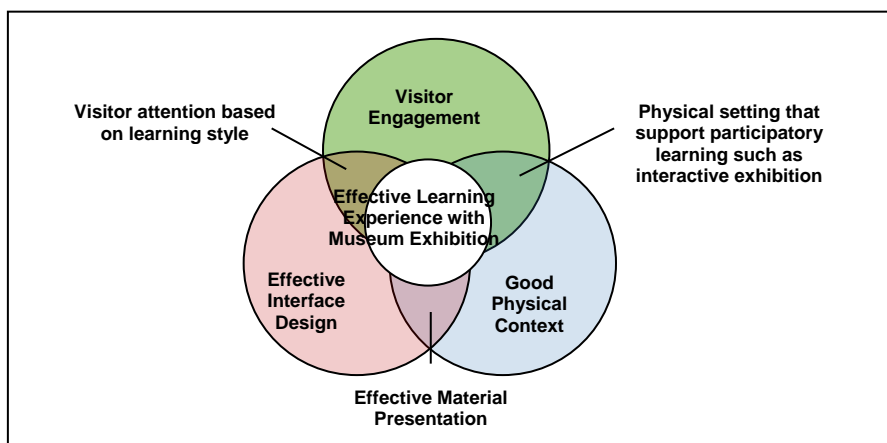

Figure 1: The Museum Visitor Experience Relationship Model

3. METHODOLOGY

The relevant data were collected through a front-end evaluation to gather information on the visitors' preferences, as well as their expectations of the exhibitions at National Museum of Malaysia in facilitating their learning experiences. The methodology used in the front-end evaluation was based on a quantitative approach which involved paper-based questionnaire survey to measure the variables for visitors' information, learning experiences, and performance of the existing interface design on permanent exhibitions at National Museum of Malaysia. The evaluation was carried out during the opening hours.

This National Museum of Malaysia houses four permanent exhibition galleries featuring Malaysia's history and rich cultural diversity. In particular, the first gallery known as "Balai A" shows the Malaysian culture of people, the second hall called "Balai B" exhibits Malaysia's historical artefacts, archaeological discoveries, traditional handicrafts, Malay and indigenous weapons collection. The third gallery or called 'Balai C' was exhibited various collections of national nature such as insects, mammals, fish and others. Beside 'Balai C' is the fourth hall called 'Balai D' which showcases materials that related to the Malaysian's economic activities such as industry commercial and public transport. Figure 2 show a part of the four permanent exhibition galleries.

Figure 2: Permanent Exhibition Galleries in the National Museum of Malaysia

4.   THE MODEL OF INTERFACE DESIGN ROLE ON MUSEUM EXHIBITION DESIGN PROCESS

The survey result indicates a greater number of repeated visitors (60%) than the first-time visitors (40%). Majority of visitors come in a group – with friends or relatives (60%), family members (24%) and organized groups (4%). The result is consistent with earlier visitors' studies, explaining the museum visit as social activities. The statistical study (Figure 3-2) reveals that lone visitors spent significantly more time (2 hours and more) compared to the group visitors in the museum visit. It seems that lone visitors are less distracted in their visit as they may not be engaged in any social activities. Group visitors tend to spend more than 3 hours in the museum as they may engage in discussions that foster their construction of knowledge.

45% of the respondents remarked the pre-historical and archaeological exhibit category as non-attractive exhibit. The survey results suggest a need for improvement in certain exhibition components in the galleries is required. The visitors' comments are summarized as the story behind certain pre-historical and archaeology items displayed was not clearly explained and this therefore make visitors lost their interest on the objects. The feedback received from participants also determined that the arrangement of objects displayed in the gallery need to be well organized to draw a narrative behind the displays. The visibility of some printed labels was found to be unclear due to aging. Some visitors have recommended improving the visibility and readability of the images and labels were not clear.

The evaluation of the exhibitions' performance is based on two contexts which are visitor engagement and physical context. The opinions of the visitors were measured by five-point Likert scale (1-Strongly disagree, 2-Disagree, 3-Not sure, 4-Agree, 5-Strongly Agree). The average result of current existing interface design of exhibitions' performance at the National Museum of Malaysia is unsatisfactory as revealed by majority of the visitor's statements. In overall, the current museum exhibitions require an improvement in presenting the information to enhance its usability for visitors' learning experiences. Some visitors claimed that they learn in their own preferred way to construct their own learning experiences. The study moreover indicates that the visitors learning preferences in general are through images/photo stills (49.7%), reading and physically interacting with the display (27.3%), audio/video shows (13.0%), multimedia interactivity (5.4%) and others (4.6%).

This feedback further can be summarized that three fundamental elements of exhibition design have insisted throughout the museum exhibition: A gallery space (Physical space), Content Collections and audiences. These three basic elements moreover have evolved in alignment with the museum's informational function and the emergence of a more integrated design discipline. Although a gallery space and content collections are continuing to guide the design development, museum visitors' attentions also have become an important influential element in most interface design development. Regarding this, there has been an increased emphasis on the strong exhibition concepts, contextual setting and meaningful narratives or description, formulated to accommodate a variety of diverse audience groups and connect visitors with the exhibition information. This is where the interface design role and the designer understanding, and skills have become essential in the development of engaging exhibition. The designer moreover is directly responsible for the

visitors' engagement and meaningful exhibition experiences. Figure 3 show a model of the interface design process that mapping from concept to interpretive considerations and respective roles and responsibilities in preparing exhibition.
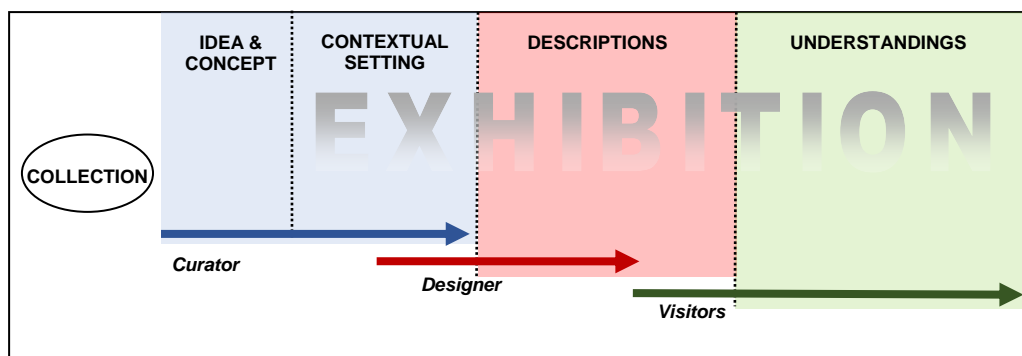

Figure 1: A model of the interface design process and respective roles of curator, designer and visitors in exhibition

5. CONCLUSION

This paper discussed the evaluation of interface design role in assessing visitors' learning experiences that involved visitors' preferences as well as physical appearance (the performance of current interface design on museum exhibitions). The study reveals that the need for museum is primarily for understanding on the role of interface design among museum curator and exhibition designers followed by intellectual visitor experiences. As museum is a social space for learning, visitors are predominantly be educated and experienced through various kinds of presentation methods. This further acknowledges that museum visitors are active learners. Nevertheless, the visitors suggested different kinds of interactive displays that they would like to have in the museum exhibitions, such as hands-on exhibits where they can have an experiment, interactive audio or video shows, augmented reality, virtual reality, 3D projection, social networking/virtual museum and touch screen kiosks or interactive tabletops to interact with the information they want to look up. These remarks are consistent with the concerns of interactive exhibition studies today.

6. ACKNOWLEDGEMENT

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