A Study on Interface Design Categories of Permanent Exhibition at Selected Museums in Malaysia

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Abstract— At a museum, the exhibition works can be demonstrated as a medium of presentation with an element of interface design for the collections and research works, In this sense, the interface design between the visitor and the museum collections was called as an exhibition where museum exhibition must communicate to the visitors deep to their mind and feeling. Within this understanding, there are 3 categories of interface design for museum exhibition namely Standard, Virtual and Augmented. In the case of it, this paper presenting the outcomes of practical analysis on the interface design performance of permanent exhibition at the selected museum in Malaysia. The analysis is based on specific interface design elements used toward an exhibition presentation.This review will helping the team of museum exhbitions in preparing en effective appearance of future exhbibition.

Keywords— interface design, museum exhibition, design process

I. INTRODUCTION

With the rapid development of science and technology nowadays, a new media technology is widely used in various industries and it also promotes the exhibition of museum across world including in Malaysia into a new stage. Therefore, the main museum roles is to exhibiting the real collections and transmit it with the help of words description, pictures and collections to communicate with people.Thus, a few existing museum display and exhibition is exhibited in traditional sense.

Museum exhibitions moreover have it own protection and education missions and they are mostly is a permanent exhibition.Philosophically, museums have a dual role. From the perspective traditional, museum needs to be functional as a social learning centre. It is including an activity such as collecting, researching, translating, documenting, preserving, and exhibiting. Nevertheless, as technology rapidly changing, the role of the museum has changed considerably in this modern era.Therefore, study on the application of new media technology in the museum exhibition is greatly importance as the static method in traditional concept cannot catch up with the new era nowadays. Moreover, a study on the influence of new media technology in museum exhibition is also a great importance in promoting the development of museum career and visitors satisfaction.

At a museum, the exhibition works can be demonstrated as a medium of presentation with an element of interface design for the collections and research works (Kamaruddin, 2019).Towards this view,the interface design between the visitor and the museum collections was called as an exhibition where museum exhibition must communicate to the visitors deep to their mind and feeling (Lord, G. Dexter and Mayrand, 2001).In the case of interface design for museum exhibition, there are three categories of interface design for museum exhibition namely Standard, Virtual and Augmented. Within these three categories, a practical analysis of the interface design performance was conducted for the selected museums in Malaysia.Hence, this paper is describing clearlyon interface design categories of the museum exhibitions. In specific, the study was involved in determining what interface design categories that currently existence on the permanent exhibition at selected museums in Malaysia.The findings from the study would be beneficial not only for the Department of Museums Malaysia but also others academic institution that offered course on museum studies

II. INTERFACE DESIGN CATEGORIES FOR A MUSEUM EXHIBITION

Communication between museum visitors and interfaces of exhibition panel has been widely discussed by scholars in the broad literature (Hyowon Hyun, Jungkun Park, Tianbao Ren, Hyunjin Kim, 2018; Castellani &Rossato, 2014; Heilig, Feuerhahn&Sikkenga, 2014). Similarly, many studies were suggested that effective production of exhibition can affected visitors experience of discovering meaning in the museum exhibition. Therefore, a visit to an exhibition counts as a good use of leisure time, but some museum exhibitions are almost overrun with visitors and some are not be visited by any visitors. This moreover is due to the presentation of exhibition material (Lorenc, Skolnick and Berger, 2007) failed in bringing visitors' experience and knowledge. From this discussion, it explains clearly that effective interface design of the exhibition affects the visitors understanding and experiences towards their visit to museum.

There are three categories of interface design for museum exhibition defined over broad literaturenamely Standard, Virtual and Augmented (Table 1). In particular, a Standard interfaces is discussed to the use of standard interfaces like keyboardsand computer monitors. While Virtual interfaces is when the interfaces block out the real world to create a reality. Finally, an Augmented interfaces category is when the interfaces does not block out the real world and creates reality (Kamaruddin, 2019). In which, interface design at the

museum as a means of communication tool that changed from the objectbased presentation (the display of art works in the museums) to the informationbased presentation (images or texts in museums halls, information kiosks, etc).

Table 1: Interface Design Categories for Museum Exhibition

Standard	Virtual	Augmented
The use of keyboards and computer monitors	It when the interfaces block out the real world to create a reality	The interfaces does not block out the real world and creates reality

III. MUSEUMSIN MALAYSIA

The main function for all museums in Malaysia is to preserving the national uniqueness and heritage. As it be managed by the federal and state governments,the focus of most of the museums in Malaysiahas exceeded beyond the museum wallsand this brings about the implementation of a different kind of museum experience (Taha 2008).Furthermore, museums in Malaysia are still face many challengessuch asbeingas a semi academic and educational institution.

In regards to the museum exhibition in Malaysia, there are a few types of exhibition including permanent exhibition, temporary exhibition, special exhibition and mobile exhibition. For this paper, apermanent exhibition by four museumsunder the Department of Museums Malaysiawas involved in the analysis. The museum are including the National Museum, the Royal Museum of Malaysia, The Lukut Museumand The Textile Museum. The brief about the museum involved as per explain in Table 2 below.

Table 2: Salected Museums and it brief info.

Museum	Brief Info
The National Museum	Located in the heart of the city of Kuala Lumpur, the National built in the style of a Malay palace is the guardian of the nation's history. This museum is a repository of Malaysia's rich cultural and historical heritage.
The Royal Museum of Malaysia	Formerly is the residence of the His Majesty the Yang di-PertuanAgong and Her Majesty Raja PermaisuriAgong. Since 2013, this Palace become a museum that exhibited a content that related to the Royal.
The Lukut Museum	The Lukut Museumwas built by the Department of Museumsin collaboration with the one state of Malaysia. The exhibition presents the history of Lukut from the early nineteen century to the time it was established at a district of Sungai Ujong
The Textile Museum	This museum exhibited traditional and modern textile. There are 4 gallery that showcases the origins of textiles from the pre-historic times, techniques used in textile, motifs and also the material.

IV. INTERFACE DESIGN CATEGORIES OF PERMENANT EXHIBITION AT SELECTED MUSEUMS IN MALAYSIA

For the practical study of the four permenant exhibitions samples at selected museum, it was defined most of those museum involved in the study are a traditional museum. As broad literature established that traditional museum is often exhibited by displaying the collections, which is a static display method, the review on the 4 permenant exhibition were confirmed that all those museum exhibited their collection in a static method. Moreover, a detail review was defined that traditional display methods cannot satisfy the demands of audiences nowadays. This was confirmed where most of the visitors just passed by the collection without stay more than 60 seconds.

Museum was defined is an important learning place for learning cultural knowledge and it gets more close to people's life. And its operation concept also gradually transformed into human-oriented. Therefore, a review on the permenant exhibition involved also displays the redundant information to the public. From all the exhibition content and the comprehensive exhibited design, there are limited new media approaches be implementing across the exhibition. As be established that new media digital technology can enrich the exhibition language of museum and can be reach better display effect, a study revealed that most exhibition space and wall are still the traditional sense.

Static exhibition is the exhibition method in traditional sense. The elements such as television and soundhave a great effect on the display effects. Moreover, application of screen projection system in museum exhibition also giving a great impact and the setting of screen projection system can play the content dynamically for museum. The combination of sound and moving images definitely increases people feeling and understanding. Therefore, a review on the exhibitions discovered that only 2 permenant exhibition at the National Museum and the Royal Museum having this approaches.It has the advantages ofthe application of touch screen where the audiences can understand or selected their interested information.

V. CONCLUSION

The target audience of each museum is the visitors with the aim of every museum exhibition is to communicate and reach the audience satisfaction. Towards this, the interface design elements and the exhibition design are the initial tools for aneffective communication. Accordingly, in this paper the interface design categories was explored and the accessibility of four samples of permanent exhibition was studied thoroughly. In summary, all those permanent exhibition were determined as a Standard interface category where all those exhibition only used standard monitor and keyboards. From the findings, it shown clearly that most of

museum in Malaysia are highly needs to understand the roles of interfaedes if n towards an exhibition performance.

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