EDUCATION AND EXHIBITION DISPLAY DESIGN IN TAMAN MINI INDONESIA INDAH

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ABSTRACT

This research aimed to look further at Taman Mini Indonesia Indah's (TMII) role in education and to enrich its visitors through exhibition design inside their main attraction, the traditional houses. It used the qualitative methods through observation of three randomly selected pavilions and data analysis used SWOT analysis and goal grid diagram. The research shows that there are no engagements between objects and visitors, the exhibitions are still lack of planning, visually unattractive and unavailability of information or written texts for most of its collection, which can be concluded that TMII is still far from achieving their educational goal. The result of this research is preliminary design for display cases that can be used in pavilions and corresponds design standards.

Keywords: display design, education role, exhibition design, Taman Mini Indonesia Indah

INTRODUCTION

Education plays a very important role and it is one of the reasons why the museum exists. In the past, education in the museum is aimed only for children, but nowadays it includes services for the broader audience of all ages, or it is called life-long learning. However, the understanding of the potential of the museum for life-long learning and the powerful pedagogical role of displays and exhibition are still limited and seldom researched (Hooper-Greenhill, 2000), especially in Indonesia. Museum pedagogy is structured with the narratives that produced through the displays and the style, in which these narratives are presented. In other words, museum pedagogy can be evaluated in relation to both contents, which refers to the subject-matter and style or the style of communication in displays. It includes how the objects are used or placed, how the information is written, the use of various forms of sensory engagement (visual, tactile, and auditory senses), as well as the use of space, light, and colors (Hooper-Greenhill, 2000).

Çıldır and Karadeniz (2014) have pointed out that the style of communication can be expanded through the senses of touching, hearing, and even smelling which will result in sensorial and effective education. McLean (1993) has discussed the guidance of exhibition design in the museum, which includes transforming space (harmony, atmosphere and padding, color, texture, graphics, materials, and lighting). While Wulandari (2014) has categorized exhibition design elements into four groups; space transformation, circulation and pacing, lighting, and display techniques. Besides displays or exhibitions itself, to make education in museums more interesting and accessible to all ages, museums start to use other methods as part of the presentation. These methods can be very creative, such as using audiovisual and living interpretation. Hooper-Greenhill (2000) has said that the methods have varied and developed creatively. For most visitors, the exhibitions and displays make up the educational experience of the museum.

Thus, it can be concluded that in order to achieve the main purpose of museums, not only the collections and the content of museum is important, but how to presents and displays those collections is also important. Museum exhibition can be considered successful when it can make the subject come to life, makes its point quickly, memorable, makes it clear where one should begin and how one should continue, uses modern display techniques that help one learn; and it includes a comprehensive display of objects and/or specimens (Miles in McLean, 1993). Most of the key successes of an exhibition can be accomplished through well-designed exhibition space, which includes display and presentation techniques, direction and circulation, lighting, ergonomy as well as other visual elements such as textures, colors, form, and so on. To fulfill the museum's educational purpose, museums need to prepare exhibition content as well as the style of communication that corresponds to contemporary visitors' need.

The case study of this research is Taman Mini Indonesia Indah (TMII), one of Indonesia's renowned museums that have attracted many domestic and international visitors and considered as the must-go attraction when one visits Indonesia's capital. TMII opened in 1975 in the east of Jakarta strongly for educational purposes. The museum's educational role is largely focused on raising awareness of Indonesia's art and cultural heritage. It is clearly stated in the guidebook that TMII is built to educate and enrich Indonesians with knowledge about Indonesian culture, thereby raising national consciousness and love for their land and nation. The research had been done to look further at TMII's educational role as opposed to its recreational atmosphere. The research shows that 52,41% visitors visit it for recreational reasons and only 12,41% wish to learn about Indonesian culture. In addition to this, more than 80% of visitors agree that it is a recreational venue rather than an open-air museum (Wulandari, 2013). From this research, Hitchcock and Stanley (2010) have concluded that there is a mismatch between what is desired and expected by the visitors in the 21st century and what are the original intentions of the founders.

TMII can be considered as an open-air village museum (Hitchcock & Stanley, 2010). Besides museums and some smaller gardens, the main attraction of TMII is the traditional houses or pavilions displays surrounding a lake of Indonesia's miniature islands. These pavilions are not built based on ethnic groups but based on what is called regional culture (Picard, 1997). Although in one province there is more than one ethnic group, thus the representation of culture in TMII based on the administrative region, which is the province. However, this phenomenon makes TMII is not so much a museum of Indonesian people, but as a museum of Indonesian provinces (Hitchcock, 1998). It is considered as the fairest and adequate way to represent all culture in Indonesia by erecting a traditional house to represent each province and exhibiting objects from different ethnic groups within the province inside the house with the hope that the visitors will learn more about the diversity of Indonesia's ethnic groups and its culture from these pavilions. Originally, there were 27 pavilions built to represents Indonesia's 27 provinces. Seven pavilions were added in 2009 and 2012 following the growth of Indonesian provinces; they are the pavilions of West Papua, North Maluku, Gorontalo, West Sulawesi, Riau Islands, Banten, and Bangka Belitung. These pavilions are independently managed by the regional government of each province and not by TMII's general management; thus the content of the pavilions depends on them. They display the best of their culture in their own manners; some promote arts and crafts and other highlight tourism. Hitchcock and Stanley (2010) have agreed to this and mention that some pavilions seem to have little connection with the promotion of tourism, whereas others appear to be acutely conscious of the need to use the facilities to promote tourism and other trading activities. All of this cultural activities and promotion are done through the exhibition, live interpretation, or cultural workshops.

As stated before, TMII is built clearly for educational purposes. The visitors are expected to learn or gain knowledge about Indonesia's diverse culture from their visits especially through exhibitions in the museums and pavilions. However, with a strong recreational atmosphere, more than 50% of visitors visit TMII for recreational purposes rather than for education. This result shows that TMII fails to achieve their educational missions. One reason why this situation occurred is the way these

pavilions present the objects and information as part of the exhibitions or the pedagogic style of the exhibitions are still inadequate. Exhibitions are experiences, thus in museums, visitors should learn not in a didactic way but also through experience. The following recent museum visitor study that sees the particular shift towards visitors that are active and looking for affective experience (Macdonald, 2007). Exhibition spaces should be designed according to design principles, focusing not only on the collections but also to the audience. What people do and how they feel in an exhibition is as important as what they learn. The exhibition messages should be delivered not only through the collections and information labels, but also through experience that stimulates various senses (visual, tactiles, and auditory). This research will look further exhibition designs inside the collection of traditional houses or the pavilions in which TMII renowned of. Whether the exhibition design corresponds the design principles and able to successfully deliver the exhibition messages to the audience according to the founder's initial mission? This research will also propose a preliminary display design suitable for collections in TMII's pavilions.

METHODS

Heerwagen (2001) has pointed out that the research in interior design can take two routes; design evaluation, where research is oriented toward real-settings, especially assessing what works and what does not in a particular design', and theory development, which focuses on understanding basic relationships and concepts. The research of exhibition space design in TMII's pavilions will take the first route with qualitative methods and study case approach. By using this approach, in-depth research about a case or phenomena will be done by collecting detailed information through various data collecting methods within a determined time frame (Stake in Creswell, 2008).

Based on the determined approach, data collecting is done qualitatively in two stages. The first stage is collecting secondary data or desk research. In this stage, all relevant data from various sources, such as books, journal articles, and websites regarding exhibition space designs and museums are studied and analyzed. The purpose of this stage includes giving general information about the topic, analyze previous studies that had been done, as well as to determine exhibition design standards. The next stage is the primary data collection through observation in the pavilions. Considering the relatively new planning and design of the recently added pavilions that are compared to other pavilions, three out of seven of these newly built pavilions are randomly selected to be used as samples. These pavilions are the Banten province pavilion, Riau islands pavilions, and West Papua pavilions. All selected pavilions are located in the same area and occupied same size buildings, however different in model and architectural style. In this stage, the data collected includes general layout, furniture and display design, general and display lighting, the use of multimedia/audiovisual, and so on. By directly observing the exhibition spaces, researchers will get real-settings information as well as other unusual factors.

To achieve the aim of this research data analysis is also done qualitatively in two stages; the first stage is the SWOT analysis method that is continued with preliminary display design using the goal grid diagram. SWOT analysis is a method used to understands the strengths and weaknesses as well as to identify the opportunities and threats of a phenomenon (Curedale, 2013). In this research, SWOT analysis is used to understand the strengths, weaknesses, opportunities, and threats of the exhibition designs in the sample pavilions. The SWOT analysis of each pavilion is then compared to find out which pavilion with the most inadequate design and can be considered as failure to achieve TMII's educational mission that will then be used as a study case. The next stage is the goal grid diagram analysis, which is used to describe the goal and identified the factors to achieve this goal (Curedale, 2013). The end goal of this research is to propose display design in an exhibition space, which corresponds to design standards, able to deliver the exhibition messages, and achieve TMII's main purpose. Thus display

design in the study case pavilion will be analyzed using the goal grid diagram and the preliminary display case that will be designed based on those analyses.

RESULTS AND DISCUSSIONS

Three sample pavilions are analysed using SWOT analysis method. The results are even though all three pavilions located in the same area and occupied same size buildings, they exhibit different cultural highlights. Banten province pavilion displays arts and crafts production categorized based on their eight districts; Riau island province exhibits their cultural and historical artifacts, such as manuscripts, pieces of jewelry, traditional toys and so on, while West Papua province focuses on their tourism. However, amongst different and various collections, these three pavilions also have similar collections such as traditional costumes, traditional tools, and traditional houses in miniature.

Seen from visitors' perception, there are five environmental implications that give respond toward exhibition design. First is the appreciation of signage and other visual hints that gives the visitor some choices of consequence, this alternate option gives the flexibility to choose their path while exploring the exhibitions. Second is a clear and readily labeled object, thus label gives further information. Third is appreciation towards lighting that can make dramatic effect to the environment within the exhibitions, the next is implication is about color that reinforcement the interpretive content, and the last is how the layout of furniture give the opportunity to get clearer visual form nearest distance and variety angle (Forrest, Packer, & Ballantyne, 2015). The five environmental implications will be analyzed in each pavilion, to see whether each pavilion the appropriate exhibition design that will increase not only visitor's appreciation but also visitor's knowledge of Indonesian art and culture.

In Banten province pavilions, the main collections are the sample of arts and crafts product from its eight districts. These collections are displayed in four large glass cabinets, size four meters long, 50 centimeters wide, and 2,5 meters tall that can be seen in Figure 1. Each district entitles half of these cabinets to exhibit their products. Besides arts and crafts products, it also displays some of the traditional tools and clothes, traditional house in miniature, and a very large touch screen interactive display that gives visitors various data and facts about Banten such as tourism, art and culture, facilities, and even the local food. The large number and variety of collections become the strengths of this exhibition; these objects are also categorized well based on Banten's eight districts make it easy for visitors to see and understand the objects. However, how they display these collections still need much improvement. Most of the art and crafts are small objects, while the glass cases mentioned earlier are very large; thus the objects look small and not important. These glass cabinets mentioned earlier are positioned back to back and occupied most space available in the pavilion. It leaves very limited space for circulation not to mention the very limited general lighting available and no particular display lighting, which makes the whole space looks dark and gloomy. Another weakness is the high glass cabinets resulting in difficulties for visitors to see the objects on the top shelves. There is also lack of information regarding the objects, not only the arts and crafts but also other objects such traditional clothes and tools that are all left out without any explanation. If there is an information label, these labels are limited in size with too small fonts and very long texts which make it difficult for the visitors to see.

Consisted of two floors, Riau islands province pavilion exhibits various art and historical artifacts, such as traditional clothes, weapons, pieces of jewelry and toys, manuscripts, and a replica of a bridal stage. There is no certain classification between objects displayed on the first and second floor. The first floor contains objects such as bride and groom mannequin seated in their bridal stage or *pelaminan* as the focus of the exhibition on the first floor. Other objects such as pictures of the important figure in Riau Islands, traditional headdresses and equipment, as well as children toys are displayed in display cases or vitrine. The upper floor exhibits various ceremonial equipment, pieces of jewelry,

textiles, and antique manuscripts. How the collections are displayed nicely in a well designed and ergonomically appropriate display case, completed with caption and information of each object in Bahasa Indonesia and English become one of the strength of the exhibition in these pavilions. Not only objects in display cases, other objects such as maps, pictures, and photographs are also completed with information label with appropriate font and text size. Other strengths of the exhibition are the well-designed display cases and limited exhibition objects make the room appear spacious with lots of space for the visitor to move around. With the availability of openings, such as doors and windows all over the pavilion, during the day natural lighting become the main source of light, and artificial lighting becomes unnecessary. Even though some special objects are displayed with the spotlight attached to its vitrine, during the observation, all of the spotlights are turned off. This becomes the weakness of the exhibition, with so many openings and natural lighting, the room abience seems flat and rather boring.



Figure 1 Arts and Crafts Display; Banten Province Pavilion (Source: Wulandari, 2017)

Tourism becomes the highlight of West Papua pavilion. In the center of the room, there is a large table where visitors can look at and take home various brochures about West Papua tourism. There is also a short documentary about West Papua beaches and underwater landscapes that are repeatedly played. They also exhibit art and cultural objects, such as traditional clothes, various traditional houses in miniature, musical instruments, and various tools and weapons. Photographs of West Papua natural beauty and traditional dances are also available. Most of these exhibition objects are displayed neatly on a table or hanging on the wall, only a few objects such as traditional textiles and herbs are displayed in glass display cases. These display cases are not specifically designed for exhibition, but rather it is usually seen in retail and shops with traditional textile stacked inside the cases, which makes it look like a souvenir corner, rather than an exhibition space that can be seen in Figure 2. Other collections are displayed on a 40 centimeters high boat shaped table completed with information label attached to them, while the collections hanging on the wall are left without any explanation which makes these objects appear more like decorations rather than exhibition objects. The adequate number of collections, various display techniques with adequate space for visitors to move around exploring the object, and good lighting become the strengths of the exhibition space. However, some display tables are too low, not ergonomically appropriate and the unavailability of information for some objects are the weaknesses.



Figure 2 Herb and Textile Display of West Papua Province Pavilion (Source: Wulandari, 2017)

From these results, it can be seen that whether it is to introduce culture, arts and crafts, or to promote tourism, these pavilions are trying to utilize it as the best as they can in order to achieve TMII's mission to educate and enrich visitors about Indonesia's diversity. Sadly, most of the exhibition planning and design are still far from successful in delivering the exhibition messages. Lack of information and unavailability of written texts are also one major problem in the exhibitions. The whole exhibition gives no certain message to the visitors. They will visit the pavilion, see the collection, and leave the pavilion without any clue about what they just have seen. Based on the observations and the SWOT analysis result in Table 1, it can be concluded that from three sample pavilions, only one pavilion with exhibition design that corresponds design standards, while the other two pavilions have not achieved this condition.

Table 1 SWOT Analysis Result

| Factors | Taman Mini Indonesia Indah's Pavilions | | | | | | | | | |
|-------------------------------|--|-----------------------------|----|---|-----------------------------------|----|---|---------------------------------|----|--|
| | | Banten Province Pavilion | | | Riau Islands Province Pavilion | | | West Papua Province Pavilion | | |
| | _ | + + | ++ | _ | + | ++ | _ | + + | ++ | |
| Display | V | · · | | | · · | V | | v | | |
| Interior Lighting | V | | | | V | | | V | | |
| Layout and Circulation | V | | | | | v | | V | | |
| Lighting Display | V | | | | V | | V | | | |
| Information Label | V | | | | | v | | V | | |

From the conclusion in Table 1, one pavilion with the weakest exhibition and display design is Banten province pavilion. It will be used as a study case for an ideal display design to display various art and crafts as well as other cultural objects in a pavilion. The display design in Banten province pavilion is analyzed further using Goal Grid diagram to identify the goals and factors to achieve and eliminate in order to achieve those goals that can be seen in Figure 3.

Figure 3 shows the preliminary design for display cases that will be proposed for various collections available in the study case pavilion, which include traditional architecture prototype, traditional clothing, and other small objects such as arts and crafts, pieces of jewelry, and so on. The display cases will be designed to meet interior design standard as well as visitors need in order to achieve the end goal; to deliver exhibition messages and to educate visitors about Indonesian culture. Even though using the Banten province pavilion as the study case, these display cases can also be used for other pavilions with similar objects. With these design standard, the pavilion can develop the design

using different materials and different ornaments based on characteristics of each province or each culture. Thus, the display not only corresponds the design standard but also shows identity and characteristics of each province.

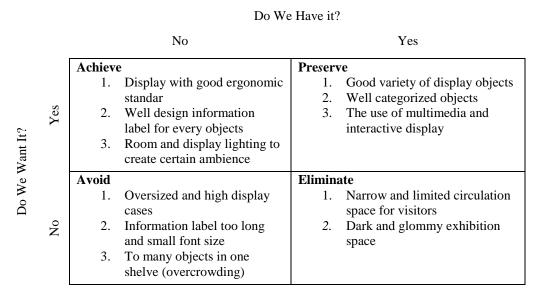


Figure 3 Goal Grid Diagram Analysis (Source: Wulandari, 2017)

For the design standards, previous research has shown that the average eye level for adults is 155 centimeters, thus artifacts or other display objects usually located around 120 centimeters high, however, this will also depend on the size and height of the objects. While the average viewing distance is 105 centimeters (Wahab & Zuhardi, 2013). Earlier research shows a more detailed eye level standard; 143 centimeters for female adults and 174 centimeters for the male adult, which make the average of adult eye level is 158 centimeters, similar with the later research, different by 3 centimeters only. To achieve this standard, the base height should be at least 91,4 centimeters (Panero & Zelnik, 1979). However, this once again will depend on the size of the objects, the bigger the object the base will be lower and the opposite. These design standards will be used as guidance for display cases in Taman Mini Indonesia Indah's pavilions.

To display a traditional architecture in miniature or other objects such as musical instruments can be displayed in the following display case in Figure 4. Two types of case available are the case a measured 100 centimeters wide, 100 centimeters long, and 120 centimeters high with the lower base, only 40 centimeters high. This type of case can be used to display opened-ceiling house prototype in order to show the interior design of the house as well as room composition inside the building. While case B measurement is 100 centimetres wide, 100 centimetres long, and 167 centimetres high with two alternatives design; B1 and B2 that can be used to show closed-ceiling house prototype, thus the base is higher than case A. B1 case is a closed-case display to avoid visitors touching the collections, while B2 case is opened-case display used where visitors are invited to touch the objects. This type can also be used to give a detail view of the structure, material, or ornaments of the objects. Besides the collection on top, the lower area of case B can also be used as display drawers or storage area. In both case A and B, information label should be located in the area where visitors can see well (eye-level area) with standard size fonts.

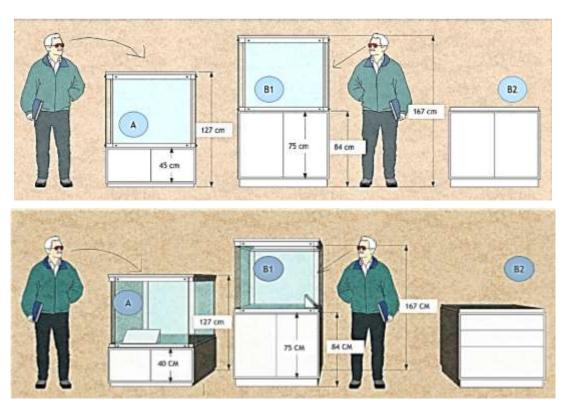
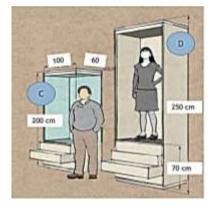


Figure 4 Architectural Prototype Display Cases Clevations (above) and Perspectives (bottom) (Source: Ruki et al., 2017)

Two alternatives design for traditional clothing display can be seen in Figure 5. Both are 100 centimeters long and 60 centimeters wide, however different in height; case C is 200 centimeters high for display without mannequin, and case D is 250 centimeters high case for display with the mannequin. Similar with case B, this type can also be combined with display drawers that can be open or close by visitors to display accessories as part of the traditional clothing that is completed with information label for each accessory. Both of these cases can also apply the open or closed system. Closed-case is used to the preservation and protects the textile from visitors touching, while the open-case system can be used for textiles that are relatively new and replaceable if there are damages, even though this system causes difficulty in maintaining the objects. However, on the other hand, this system gives opportunities for visitors to interact with the objects. Similar to the previous cases, the information label should be available according to the human eye level standard.



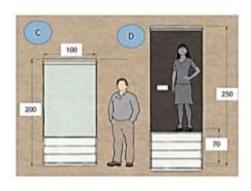


Figure 5 Clothing Display Cases Perspectives (Left) and Elevations (Right) (Source: Ruki et al., 2017)

Smaller objects such as arts and crafts or manuscripts can be displayed in two alternatives that can be seen in Figure 6; case E and F. Both measurements are 100 centimetres long and 60 centimetres wide, however different in height, case E is 150 centimetres high while case F is 120 centimetres high and tilting to a certain degree. Case E with different leveling will make the small objects seen more clearly, while case F especially uses manuscripts. With many objects in one case, it needs to remember to avoid overcrowding or displaying too many objects at once. Information label needs to be available for each object where visitors can see well also with standard size fonts.

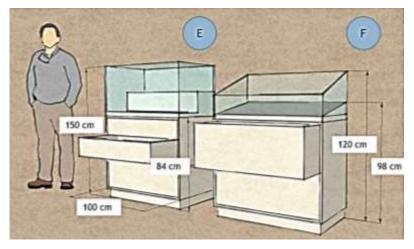


Figure 6 Small Objects Display Cases Perspectives (Source: Ruki et al., 2017)

CONCLUSIONS

As a popular attraction for both domestic and international visitors, TMII is built primarily for education with its strong educational mission to educate and enrich visitors about Indonesia as well as for nation-building, through its facilities, including its main attraction the collection of traditional houses as the prime facilities to deliver information about the traditional art and culture. However, if it is seen from the exhibition design and visual presentation of these pavilions, TMII is still far from achieving its educational mission. Results analysis from three randomly selected pavilions shows only one pavilion, Riau Island province pavilion has the good and proper display with appropriate ergonomic standard completed with information labels for most of its collections, despite its unattractive design and lighting display. While the other two pavilions are still lacking not only in design but the availability of information labels as well. Thus, it can be concluded that all of these pavilions still use mass communication approach in their exhibition, where there is no engagement between the objects and visitors. Moreover, the exhibitions are still lack of planning, the layout, circulation, lighting and furniture design, ergonomic standards, and even the availability of information and written texts that are still far from appropriate. Many objects are left out without explanation and proper display. The design itself is visually unattractive; there are no strong messages or meanings conveyed in the objects, just a random display of objects without certain meanings. Visitors will visit the pavilion, look at the objects, and exit the pavilion without any clue about what they have been seen. Next step of this research is preliminary design for display cases that corresponds design standards with Banten province pavilion as the study case; however, these designs can also be used in other pavilions with similar objects by using different materials and ornaments based on characteristics of each province. With a good and attractive design, visitors will be able to receive the exhibition messages and TMII's goal will be achieved.

The educational purpose in TMII can be achieved in two ways; content and collection preparation as well as the style to deliver the messages. Rather than the formal and didactic approach in exhibitions, contemporary society prefers to learn through process and experience, such as room experience, interactive display, and so on, especially in TMII where education is served inside traditional houses and in a recreational atmosphere which makes a perfect ingredient for fun and educational experiences. Better and ideal design needs to be done; thus, visitors can easily receive exhibition messages. Their visit will become an unforgettable one, and the main purpose of Taman Mini will be achieved

A wide variety of objects and different highlights in every pavillions has become the limitation of this research, which makes it difficult to design specific display cases; thus the display cases designed according to design standard and can be used for various pavilions. However, to design more specific display cases that is unique for each pavillions, further research needs to be done not only in relation to design standard, but also regarding each provinces icons, characteristics, and ornamentations to add local value to the display cases design. Not only in display cases design, but another research can also be done related to an exhibition space design as a whole as well as the interactive design that meets contemporary visitors need. By adding local value to each pavillions and combined them with interactive design, visitors will learn not only from the objects but also from the exhibition design itself in a fun and unforgettable way.

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