Activity Booklet Design for Museum Bank Indonesia for Middle School Students

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Abstract

With the development of the times, museums should be a place of learning that is more interesting than just a place to display artifacts. There is not much interactivity done by museums to increase visitor engagement whilst interactivity itself does not always have to be in a highly technological form. This research will design an activity booklet in order to help student visitors get better engagement during their visit in the museum. This research uses book design method by Robin Landa. The process revealed that in making this booklet, it is important to put context in every activity thus making the student visitors learn that there are connections between them and the objects displayed. The implication of this study can help museums to make more effective and lower budget interactive media for student visitors.

Keywords: museum, interactivity, engagement, booklet, students, visitors

1 Introduction

According to the Presidential Museum Writing Team taken from the website https://kebultur.kemdikbud.go.id, museum is an institution intended for the general public and functions as a place to collect, care for, and present and preserve people’s cultural heritage for the purposes of education, research, and fun or entertainment [1]. In its development, the museum does not only display and exhibit historical artifacts, but also as a place to exhibit high-tech and futuristic objects in the hope that it will motivate visitors to continue working and innovating, without forgetting its roots [2].

According to Vergo, as quoted by Boyd and Hughes, the function of museums as a place for exhibitions and displays is reduced and replaced by the success or failure of museums in the eyes of the public [3]. A newer approach is needed to increase visitor engagement to museums. Grewcock in Boyd and Hughes, writes about "travelogue", which is a condition in which museum visitors are given a loose and open visiting experience. Visitors are shown the museum’s collections, but by bringing these artifacts closer to their daily experiences so that they are contextual (p. 7). Hopefully, by becoming the “main character” in the contents of the museum, visitors will be able to see the museum more closely and see the causal relationship with their lives in the present or in the future. This is also reinforced by the statement of Pruulmann-Vengerfeldt and Runnel (2011), that the old public opinion regarding museums as places with historical and high value items must change because currently the society needed is a reflexive society [4]. Reflexivity comes with Exercise, which is when humans question and analyze pre-existing knowledge. Instead of giving definite answers, museums should invite people to always participate in critical thinking (p. 173).
Based on observations, in the Kota Tua Jakarta area there are eight museums that are close together so that they can be visited in just one day. However, out of the eight museums, only Bank Indonesia Museum uses an interactivity approach for its visitors. The form of interactivity displayed is quite high, namely by using a touch screen display which allows visitors to search for various information regarding the historical development of the Bank Indonesia Museum Building. In fact, interactivity does not have to be presented in the form of sophisticated technology. Technology is a potential tool for increasing engagement [5].

In this research, we will try to design a low level of interactivity for museums in Kota Tua Jakarta. Interactivity takes the form of a booklet that you can read and fill out during the trip. This booklet will contain information and activities regarding the content of the museum; however, it will be adapted to the context of today's visitors so that visitors can experience the causal relationships of the museum collections in their daily life.

2 Learning in Adolescents

Zosh, et al, state that currently learning methods are very diverse and cover other areas such as physical development (for example: fine and gross motor skills), social (for example: empathy and theory of thinking), emotional (example: development of self-regulation and self-conscious emotions), and creativity (eg, different thoughts, designs, and expressions) [6]. According to Hirsh-Pasek, Zosh, Golinkoff, Gray, Robb, & Kaufman, in a deep contextual understanding there are conditions that must be met, namely active (mind on) and involved (the focus is not distracted) which is supported by meaningful material, especially in the context of social interaction. The conceptualization of the material is made as a basic foundation and is combined with a pleasant state of mind so that children can learn while playing.

Guided play is one way that can be done to learn while playing. Guided play combines free play with learning outcomes guided by adults [7]. Conklin, in the article “The Importance of Play for Adolescents” states that for adolescents, play can not only foster creative thinking, problem solving, independence, and persistence, but also help adolescents develop independence and ownership in learning, opportunities for physical activity, creative expression, and the ability to demonstrate their competence [8]. Harper also states, during puberty the human brain is more sensitive to the influence of the individual environment and life experiences so that adolescence is considered appropriate for learning new things and making positive relationships with other individuals which will help adolescents optimize their developmental period and learning period [9].

3 Book Design Methods

The design of the museum booklet was carried out using the book design methodology by Landa [10]. There are 5 steps that can be taken in this design, namely orientation, analysis, conception, design, and implementation. Meanwhile, the data collection method will be based on IDEO's book “Human Centered Design” [11]. However, this research will only conduct to stage 4 (design) because the implementation stage is not possible to be done due to COVID-19 physical distancing issue.
3.1 Orientation

The Orientation stage begins by determining the design objectives, target audience, media plan, and other parameters that pertain to this project. The methods used in this stage are secondary research, interviews, and personas. Secondary research is carried out by reading journals and books related to experiences in museums. Interviews are used to obtain information about the museum which is used as a case study and how the museum designs booklets for visitors. Meanwhile, the persona is used to get an accurate picture of the profile of the visitor who is the design target.

3.1.1 Interview with Museum Bank Indonesia

Interviews were conducted with the management of the Bank Indonesia Museum, namely Ade. Bank Indonesia was chosen as the case study in this research because the building used is historic, has a large area divided into certain categories, and has used interactive media in several of its exhibition areas. Museum Bank Indonesia (BI) is run by the Central Bank of the Republic of Indonesia in an effort to educate the public about the role of BI in the history of Indonesia. Funding was obtained from Bank Indonesia under the Department of Communications. Museum Bank Indonesia occupies the De Javasche Bank Building, a legacy from the Dutch colonial era and opened to the public in 2006. Museum Bank Indonesia is a vehicle for education and recreation about BI functions, showing the state of the Indonesian economy in the past, present, and hopes for the future, as well as additional facilities, such as exhibition halls, cafes and theaters.

There are around 700 collections there in the form of numismatic and non-numismatic collections which are divided into 3 clusters, namely the institutional cluster (BI history), the numismatic cluster (money collection), and the building architectural cluster. The numismatic collection itself is divided into 7 categories, namely the Hindu-Buddhist kingdom period, the Islamic kingdom period, the trading period, the Dutch East Indies period, the Japanese occupation period, the independent Indonesia period, and the Bank Indonesia period. The flagship collection is a collection of currencies from the royal era to the present. At Museum Bank Indonesia, there is an exhibition object that uses interactive media, namely books whose pages are projected and can be reversed with sensors and a touch screen monitor containing information about Museum Bank Indonesia’s building. According to Ade, in the future Museum Bank Indonesia will add a virtual museum and multimedia applications.

3.1.2 Interview with Museum MACAN

Interview with Museum Macan Mass Education Division was conducted online due to physical distancing issue. After submitting the requested files on the Museum Macan website page, the author received an email reply from Nina Hidayat as Head of Communications. Museum Macan was formed with the main objective of providing access to art education for the people of Indonesia and Southeast Asia. In doing so, Museum Macan conducts research on several major museums around the world, including the Guggenheim Museum in New York, the Hirschhorn Museum in Washington DC, the Mori Art Museum in Tokyo and the National Gallery Singapore in Singapore.

Each program in the Museum Macan is planned over the next 1-3 years under the supervision of the museum director. The museum’s sustainability program is carried out by means of sponsorship, patrons (individuals), corporations, and annual membership. Meanwhile, the arts education program is adapted to the educational curriculum in Indonesia. In making interactive programs
or public engagement, the education team and public programs are carried out under the direction of the museum director. The education team makes a museum guidebook for children at each exhibition because children are a very important audience for the museum. The hope is that children can get to know art in an environment that is fun, interesting and inspires them to imagine and work.

In applying interactive media in museums, Nina said that interactive media, as the name implies, is a tool to convey a narrative. Even the most interactive media, if not supported by a strong narrative, become like a good and attractive package without quality content. Therefore, the museum is more selective in presenting interactive material. In the future, Museum Macan is collaborating with 2 local VR & AR technology companies to deliver a hybrid experience which will be announced soon. The use of this technology is accompanied by a strong narrative, as well as a thought process that is mature to be effective.

3.1.3 Persona

Persona is a fictional character who is designed similarly to the user who will later use the designed product [12]. The author designed two personas to help determine which users will use this activity booklet. Based on predetermined demographics, users will focus on children or adolescents aged 11-15 years, have student status, and visit museums to spend productive time with friends or family as well as study assignments with school (field trips).

![Figure 1. Personas of booklet users](image)

3.2 Analysis

The Analysis stage is the stage in which the data results from the orientation stage are processed and concluded as the basis for the design design. The analysis was carried out by means of a reference study (analogous inspiration). A reference study was conducted to see what components should be included in a museum activity booklet.

3.2.1 Reference Study

This booklet is a booklet that can be taken on the 2nd floor of the museum area by visitors to the Asian Civilization Museum. This booklet is a softcover booklet with a total of 12 full color pages. Apart from containing activities, this booklet also provides 3 postcards and a set of stickers, some of which can be used for one of the activities in the booklet. Broadly speaking, this booklet contains reflective visiting experiences. It can be seen from the sentence “Treat this book as the beginning to your adventures, and use what speaks to you” (Treat this book as the beginning of
your adventure and use it if there are artifacts that interest you). Besides being reflective, this book is also customizable for every visitor to fill in the activities in this book according to their wishes so that they can become a keepsake after visiting this museum.

Based on the activities carried out, it can be seen that on each page the visitor is asked to reflect on himself related to the artifact being discussed. There are questions such as “What makes you feel happiest?”, “How do you think the artifact feels or smells?”, “How long do you think this artifact was made?”, or “Circle the word that you think describes you!”. This reflective question tries to make visitors feel closer and connected (relatable) with the artifacts on display so that visitors not only see the museum as a place to store items from the past, but also as a reminder that what is in the present is closely related to the past.

**Table 1. Connection Between Activities and Art Inspirations**

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Activity</th>
<th>Inspiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What's your name?</td>
<td>Mark the map of Southeast Asia according to the one already visited in the museum</td>
<td>None, but explains briefly about ASEAN</td>
</tr>
<tr>
<td>2</td>
<td>Bowl and Beautiful</td>
<td>Look for the zodiac sign and see if the nature of the zodiac is in accordance with the nature of the person</td>
<td>Monk's bowl from Thailand</td>
</tr>
<tr>
<td>3</td>
<td>Some Birdy Told Me</td>
<td>Decorate the Hintha bird with the sticker set provided</td>
<td>A vessel in the shape of a Hintha bird, the vehicle of the gods, from Myanmar</td>
</tr>
<tr>
<td>4</td>
<td>Are You Up to the Tusk?</td>
<td>Look up words and fill in elephant pictures with fingerprints (can only be done at home)</td>
<td>An elephant-shaped vessel from North Vietnam</td>
</tr>
<tr>
<td>5</td>
<td>Storyboard</td>
<td>Drawing of pattern from symbols</td>
<td>Cloth hoops from the Hmong tribe of Laos, Thailand and Vietnam</td>
</tr>
<tr>
<td>6</td>
<td>Fighting</td>
<td>Think strategically like a soldier by playing mini games provided with friends or family</td>
<td>A soldier's headdress made of monkey skulls, from the Philippines</td>
</tr>
<tr>
<td>7</td>
<td>Figuratively Speaking</td>
<td>Looking for images of ancestral statues in a bustling atmosphere</td>
<td>Ancestral statue (Aitos) from Timor</td>
</tr>
<tr>
<td>8</td>
<td>Make-A-Car</td>
<td>Finding the name of the animal that inspired Makara, acting as a mythological animal, and creating a litter design from a combination of various kinds of animals</td>
<td>Ornamental stretcher shaped Makara from Tanjung Malaya</td>
</tr>
</tbody>
</table>
3.3 Conception

The Conception stage is the stage where the writer looks for insights that will become the theme of the design. The methods used in this stage are create insight statements, mind mapping, brainstorm, and create a concept. In looking for insight statements, the author will analyze the reference studies that have been done previously. Then the author will do mind mapping and brainstorming to find big ideas (concepts).

3.3.1 Create Insights Statement

Based on the results of previously written reference studies, the author obtained several notes in designing a booklet for a museum. First, it is not recommended that booklets contain only information and photographs regarding existing artifacts. Distinguish visiting booklets from catalogs. This can lead to wasted booklets because visitors perceive them as rubbish. Second, the content in the booklet should be designed with the visitor experience in mind. It doesn’t matter what artifacts are written in the booklet, but visitors must be able to make them relatable with artifacts from the museum. Third, booklets should be designed in a form that visually attracts attention and is not stiff so that it is far from being patronizing. Fourth, the booklet must be customizable so that visitors can have the context of the visit and have memories after visiting the museum.

3.3.2 Mind Mapping and Brainstorming

In this stage, the authors do a mind mapping to find the keywords needed in book design. After doing mind mapping, the writer found several words that often appeared, namely memory, colorful, and contextual.
3.3.3 Create A Concept

Based on the three keywords that have been mentioned above, the writer then arranges them into a big idea, namely “Memory is full of color and full of meaning”. The memory in question is a visiting experience that is not easily forgotten because there are objects that can be used as reminders (memento). “Full of color” means a pleasant experience because it uses various senses and is reflective. The reflective attitude of visitors can vary depending on their background and mindset. Meanwhile, “full of meaning” means that visitors can interpret each visit with different emotions.

Every activity carried out by visitors has a purpose that is able to make visitors look back on their background (and their immediate environment) so that a visit to the museum is not seen as just sight-seeing, but also contextual to their current life. With an emotional attachment, it is hoped that visitors will be more engaged with the museum.

3.4 Design

In the Design stage, the author will use the mood board method, get visual, design principles, storyboarding, and rapid prototyping. Mood board is made so that the design has unity. Get visual is done by making illustration sketches. The storyboard is used to create the layout of the museum activity book. Meanwhile, design principles will be used for designing the activity book. Finally, rapid prototyping will be done by designing then providing feedback, and revising the design.

3.4.1 Moodboard

In designing the mood board, the author adjusts to the insights and the big ideas. First, in designing a booklet, one of the things that must be considered is the matter of production costs and sustainability. Because admission ticket is cheap for the public and free for students, the consideration is that this booklet should be printed with limited production costs.

Therefore, the authors chose the A4 booklet size so that the printing process was easy and did not leave a lot of paper. The type of paper to be used is 70 GSM HVS paper. The booklet consists of 8 spreads or 16 pages (including covers) to minimize paper waste. Meanwhile, color selection is limited to only 3 colors, namely black, dark blue, and red. This limited color selection is also based on the mass printing process. The fewer colors used, the cheaper the production costs. The selected illustration represents the memory and contextual keywords. Because this booklet will be filled personally by the user, an illustration style that is not too neat is chosen so that it can match the user’s handwriting. In addition, the illustrations used are not too neat so that the user does not feel intimidated because there will be several activities that ask the user to describe their thoughts or imagination.

3.4.2 Get Visuals

Of the 30 rooms that can be visited at the Bank Indonesia Museum, the author only chooses a few rooms that can represent Museum Bank Indonesia. The selection of the room is based on the objects in the room and the information conveyed in that room. There are several rooms whose information is similar so that they can be reduced to a single content. Apart from information and objects, room selection is also based on rooms that have more value because the Bank Indonesia building itself is a historic building with hundreds of years of age.
The copywriting is based on the results of a reference study of the Asian Civilization Museum Singapore activity booklet. The title of each page is not like the name of the original room at Museum Bank Indonesia, but is a text that expresses feelings or activities carried out in that room. Meanwhile, the activities on the page follow the information and objects that exist. For example, on pages 14-15, the page is titled “Kerincing!” which is the sound when coins fall on the floor. Then the activity undertaken is to draw user-made banknotes. This was obtained from the room that was used as content, namely the numismatic room which did contain various kinds of money, ranging from old money to foreign money. After the draft was done, the author began designing a layout for Museum Bank Indonesia activity booklet.

3.4.3 Design Principles

First of all, the writer determines the color that will be used. The colors blue, red, and black were finally chosen as the main color palettes for this activity booklet. The blue color was chosen as the representative color of Bank Indonesia, while the red color was chosen as an accent. Meanwhile, black is taken as the color for body copy so that it is easily read by the user. This limited color selection is done so that booklet printing does not cost too much.

The second design principle used is the grid / layout. In its application, the author uses a modular grid. The choice of modular grid is based on the content of each different page. For example, suppose one activity requires a full page, while another activity contains short, but large amounts of information. By using a modular grid, placement of individual assets or text will be easier. In addition, the modular grid also has a less rigid impression making it perfect for this informal designed booklet.

Third, the writer chooses a typeface. Like the informal nature of this booklet, the author will choose a typeface that is less rigid. There will be 2-3 typefaces used for the activity title, body copy, and other additional information. The title will use a more ‘playful’ typeface, while the body copy will use a serif typeface so it’s easy to read if the content is long enough.

3.4.4 Storyboard

The method that will be done next is to create a storyboard. In making books, storyboards are sketches that contain information about the content that will be in the book. Based on the results on the booklet’s draft, the author then sketches the layout for the activities in the booklet. This storyboard is made to simplify the work of illustrators and layout designers in designing booklets.
3.4.5 Rapid Prototyping

After making the layout of the storyboard, the author continued by making rapid prototyping. Rapid prototyping is done by digitizing the illustrations and layouts, and selecting the typefaces to be used. Because the author has carried out the mood board stages and design principles at the beginning, the rapid prototyping stage does not take too much time.

![Figure 5. Final Design](image)

After doing the first digitization, there were several corrections to the design results, for example removing the character illustration on page 4 (stained glass) because this book will focus more on the user and remove all photos from the booklet because it does not fit the desired budgeting concept. Apart from that, the author also added some basic shapes behind some of the assets to make them stand out. In the final design, the consistency of the colours and the activities are stand out. There is some additional content in the body copy to clarify why the activity was carried out. All text has also been converted to digital to make it easier to read. For the headline, the font chosen is a font that has a handwritten impression. Meanwhile, the selected body copy font is serif.

3.5 Analysis

Design analysis is carried out on the final work to see objectively whether the resulting booklet design is correct or not. The first analysis was carried out on the results of the designs that had been printed on A4 size or actual size HVS 70 GSM paper. Printing is also done back and forth according to the desired budgeting concept.

In the illustration analysis, in general the unity between one page and another is seen. The illustrations also easily explain what to do with the activities in the booklet. However, the illustration on the floor plan of Museum Bank Indonesia does not look clear enough because the blue in the image is too strong. Apart from that, it did not explain the road direction of the plan. It is better if the plan is simplified into a number of dominant rooms and it is not necessary to include all room names in the booklet because it is not directly related to the purpose of the booklet. The same is the case with the spice illustration on page 6. The red blocking is too strong, which makes the object of the illustration not stand out. We recommend that colors that are too blocky like this are simplified into patterns, such as lines or boxes so that they don't take the attention of the main object.

In the content analysis, there is continuity between the rooms in Museum Bank Indonesia and the activities carried out. However, there are several activities that are deemed redundant because their
content is similar even though they are carried out in two different rooms, namely drawing stained glass designs. The activity of drawing stained glass on page 5 focuses on objects that have value or meaning for the user, while on page 10 it focuses on objects with economic value. Both of them share stained glass drawing activities because both rooms have stained glass with the same purpose as their activities. We recommend that you replace the activities on page 10 with activities that are more related to the room or green colour such as the name of the room.

In colour analysis, it has been seen that there is a unity of blue and red as the two selected colours. Apart from blue and red, black was also chosen to add contrast. Black is generally used for text. However, you can also see the use of black in some illustrations, for example on pages 13 and 14. The use of black in the illustration has the impression that it is not unity with other objects on the page because both blue, red, and black are strong and contrasting colours, so that all the colours seem to ask each other’s attention. The black can actually be used, but its use is limited to the text in the body copy only.

5 Conclusions

Designing an activity book for a museum requires a deep understanding of the function of the museum and what information it wants to convey. The Bank Indonesia Museum has the main function of informing the role of Bank Indonesia from the Dutch colonial era to the present. Of course, in such a very long and detailed history there is a lot of information that must be conveyed and it is impossible to provide all of this information to visitors within a limited period of time. Therefore, this booklet is designed not only as a tool for the activities of middle school-aged visitors, but also as a bridge between the museum and its users.

This booklet is designed in such a way as to increase the user’s curiosity about the object being viewed. Users are invited to look back, find memories of themselves or people around them that are contextual to the object being seen. Users are also asked to look ahead, imagine what actions would be taken if they were in the same position as people in the past. Not all information is provided in this booklet to avoid information overload. The information in the museum is summarized and adapted to the current context in order to create user engagement. Good user engagement is the beginning of learning.

Every museum, although they share the noble purpose of being a source of knowledge for visitors, in the present time must be able to add other functions such as a place for community discussion. In this context, the community in question is visitors to high school students. The museum must be able to make visitors feel attached to the object or information presented in the museum. The hope is that there will be a more diverse and in-depth exchange of information between the museum and its visitors.

This booklet itself is not without imperfection. That the effectiveness of the booklet and user engagement that is expected to emerge can only be seen if this booklet is tested in the field. With the trial on the user in accordance with the design target, it is hoped that the effectiveness of the booklet will be seen and the improvements needed.
6 References