



How does the museum post-pandemic recovery? Exhibition design of DPR RI Museum

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ABSTRACT

Museums are essential for connecting with and educating the public about their collections. A schism has developed between the public and museum institutions due to the Covid-19 pandemic's limits on museums. The inaugural exhibition of the DPR RI Museum aims to answer the challenge of readiness to recover museums' post-pandemic situation and conditions by rebuilding public involvement and communication. This study uses a mixed method equipped with research and development (R&D) using the ADDIE model product development systematics. The steps taken in organizing the exhibition are; (1) analysis of the historical context of the DPR RI building; (2) exhibition design; (3) development of 3D exhibition layout design; (4) implementation (exhibition); and (5) evaluation. A series of conferences and workshops supported the exhibition to educate the general public about the DPR RI's role as a home for the people. The results of museum content research and the development of a 3D museum layout model for exhibitions based on the validation of museum exhibition layouts are feasible to implement as a museum exhibition. Organizing exhibition events is the bond between the museum and the public, as evidenced by visitors' enthusiasm and positive response. This exhibition provided an important contribution to the post-pandemic situation, specifically as an effective and informative mode of communication in presenting the history of the DPR RI buildings to the general population.

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1. Introduction

The results of The International Council of Museums (ICOM) report in July 2021 show that museums still have to make efforts to recover from the long-term impacts caused by the Covid-19 pandemic. The United Nations Education Scientific and Cultural Organization (UNESCO) survey shows that 94% of museums in the world carry out work-from-home protocols, thus closing museum visits [1], and 13% of them are permanently closed [2]. Adapting to pandemic situations and conditions by developing various digital platforms has not been able to present the same experience when visitors visit the museum in person [3]. During a pandemic, UNESCO encourages policy implementation; (1) digitization of collections; (2) inventory updates; (3) development of Information and Technology-based infrastructure; (4) stability of internet development; and (5) development of digital skills of museum staff [1]. The challenges of the pandemic era are opportunities to communicate, share content and reach a wider audience through social networks [4]. The crucial functions of museum institutions are to protect, develop, utilize collections, and communicate them to the public [5]. Communications made by museums to visitors during the pandemic, both online and through social networks, provide pretty significant limitations [6]. Before the pandemic, one of the steps often used to communicate with visitors was exhibiting museum collections. However, these activities cannot

be carried out due to an appeal to implement "social distancing". The collection displays can make museums more relevant, inclusive, communicative, and valuable while providing visitors with memorable experiences [7]. The museum's fundamental event, namely the presentation of museum collections, has been affected by the stoppage of physical activity during the pandemic, resulting in a fall in the museum's function in educating and encouraging public interest [8]. Pandemic situations and conditions, when viewed from a positive side, can be used by museum managers to carry out; (1) re-evaluation of museum collection management; (2) development of museum content; (3) physical access to museum collections, and; (4) preparation museum exhibitions [9]. One of the strategies in dealing with a pandemic is to diversify actions that must be carefully prepared in recovering from post-pandemic situations and conditions [10].

Museum exhibitions are the choice to welcome the revival of museums after the pandemic. Museums, essential places to display and exhibit historical objects creatively and communicatively, require careful preparation to recover quickly with the right design. To carry out exhibitions starting from content selection, exhibition management design, organizational practices, and the post-pandemic situation are the main points that need attention [11]. Providing an appealing and interactive display at museum exhibitions is a suggestion for optimizing museum recovery in teaching and establishing communication with post-pandemic museum visitors [12]. In accordance with these recommendations, the Museum of the House of Representatives of the Republic of Indonesia (DPR RI) used the time during the pandemic to evaluate and prepare for the exhibition. Organizing the DPR RI Museum exhibition shows museum managers' commitment to educating visitors about the history of the Indonesian parliament. The DPR RI Museum exhibition event was held to provide facilities and a manoeuvre to restore the situation and condition of the museum after the pandemic. This temporary exhibition is entitled *Rumah Rakyat: Gedung-Gedung DPR RI dari Masa ke Masa*, which indicates that the DPR RI museum wants to display a portrait of the journey of the DPR RI in its actual frame, namely as a people's house. The research results on tracing the DPR RI buildings in various cities and the content analysis carried out will serve as a reference in developing 3D exhibition designs implemented in exhibitions. The significance of extensive research in producing event displays significantly impacts the DPR RI Museum's ability to recover from the outbreak and resume public contact, interaction, and education.

2. Method

2.1. Research Methods

This research is a type of Research and Development (R&D) research with the ADDIE approach instructional design model: Analysis, Design, Development, Implementation, and Evaluation [13]. The ADDIE model design's vision can direct research implementation in a systematic way [14]. This ADDIE model employs a procedure-based approach to produce high-quality manufacturing and product validity testing [15]. The ADDIE procedural model is a descriptive model that describes the steps needed to make a product. The product produced in this study is a 3D design of museum displays that will be implemented at the exhibition. The concept of developing the ADDIE model can be seen in Figure 1.

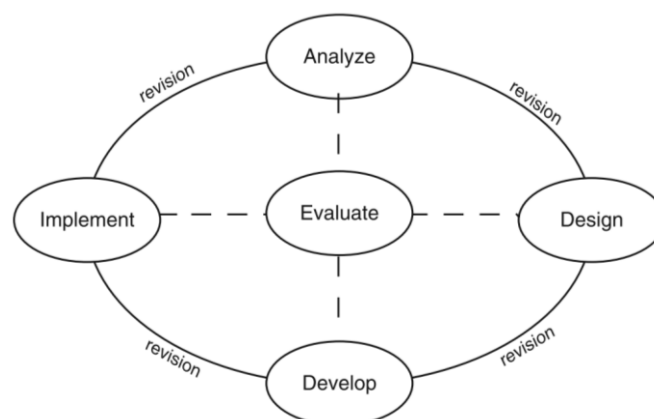


Fig. 1. ADDIE Design Instructional Concept Research and Development

2.2. Validation Design Exhibition

The exhibition layout design was developed based on research and development considering the chronological flow. The 3D layout design of this exhibition is not only concerned with aesthetic values and contains historical aspects. Validation of the feasibility of the exhibition layout 3D design is carried out by the agency concerned, namely the Public Relations and Museum of the DPR RI.

3. Results and Discussion

3.1. Analyze Content Pameran

Exhibit content is sourced from data, photos, and historical evidence of buildings used for parliamentary meetings and sessions for a century. The works in the exhibition show the track record of the journey of these buildings chronologically. The team carried out the collection of historical archives, photos of buildings in the past, and photos of the current condition of the building, starting from buildings in the DKI Jakarta area. The collection of photos of the condition of the buildings then continued to the areas of Purworejo, Yogyakarta, Solo, and Malang. A glimpse of the DPR RI buildings is compared following the available photographic evidence. The buildings were photographed with a viewpoint similar to the previous photo with the hope that through this exhibition, the general public can see these buildings as "Rumah Rakyat" that have existed since ancient times and are still standing today. The buildings that have played a role in the journey of the Indonesian parliament and are featured in the exhibition are; (1) Pancasila Building, Jakarta; (2) Schouwburg Building, Jakarta; (3) Moeslimin Hall, Jakarta; (4) Cilacap Street Building, Jakarta; (5) PSKD and UKI Building, Jakarta; (6) City Hall Building, Surakarta; (7) Van Laar Hotel, Purworejo; (8) Indonesian People's Building, Malang; (9) Mataram Ex-Loji Building, Yogyakarta; (10) Siti Hingil Keraton, Yogyakarta; (11) RI House of Representatives Building in Banteng Square, Jakarta; (12) KUPAG Building, Jakarta; and (13) MPR/DPR/DPD RI Complex, Jakarta. The content is presented according to historical sources and is narrated with different photo collections and several collections of the DPR RI museum. In addition, two of the exhibition's contents are accompanied by audio so that viewers may hear them firsthand. The two articles discuss the 1966 Tritura Exhibit at the DPRGR and the Moeslimin Convention Center.

3.2. Design Museum Exhibition

The development of this exhibition design begins with selecting the venue for the exhibition, namely in the lobby of the Indonesian Parliament building. The area was chosen due to its strategic location, making it simple for guests to access. The location of the exhibition plan can be seen in the following Figure 2 and Figure 3. After selecting the exhibition location, the exhibition floor layout is developed. The floor plan for this exhibition is compiled, complete with panel descriptions and content displayed in the exhibition. The exhibition layout uses a thematic-chronological flow. The story plots that have been selected are displayed chronologically according to the layout that has been prepared. There are fifteen panels in the exhibition layout, two of which are the exhibition prologue and the coffee room as a photo booth. Exploration of the exhibition layout in the initial plan is as follows.



Fig. 2. Selasar DPR RI

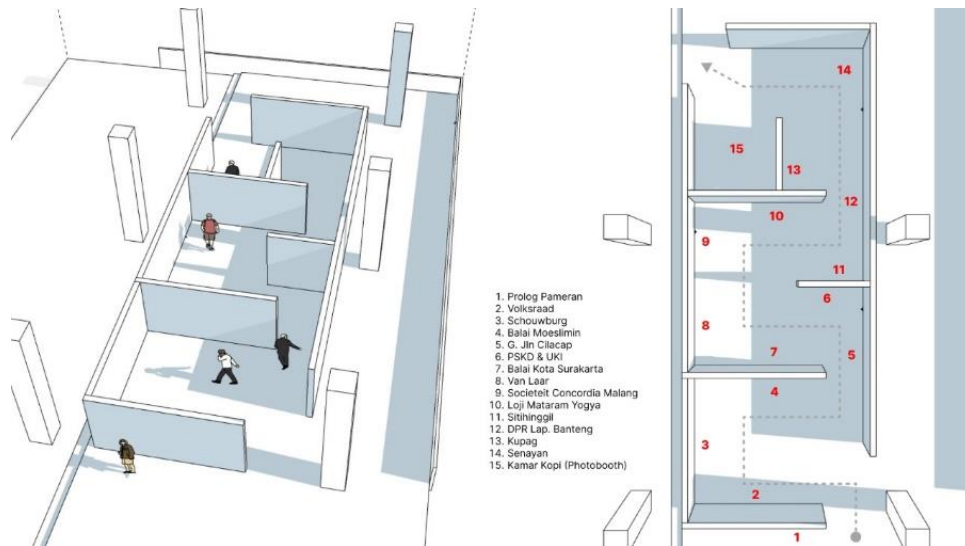


Fig. 3. Exhibition Plan Site

The circulation of visitors is made dominant to the left of the displayed objects. The first panel enters on the visitor's left. The introductory text is also on the left and followed by other objects. People in Indonesia are habituated to reading from left to right, so the dominating location should be on the left when viewed from the entry. However, some panels and objects are still placed on the right for space fulfilment and aesthetics. Based on anthropometry, the average body measurement of Indonesians is 160 cm, and then the layout of the object is made according to the measurement theory [16]. The viewing level is utilized so that exhibition attendees feel comfortable and suitable when viewing the object display. The development of the museum's design uses details measuring 2.44 meters high and 4.88 meters wide in each building, and the general area of the exhibition panel is 7m x 16m. The size of the exhibition layout can be seen in Figure 4.

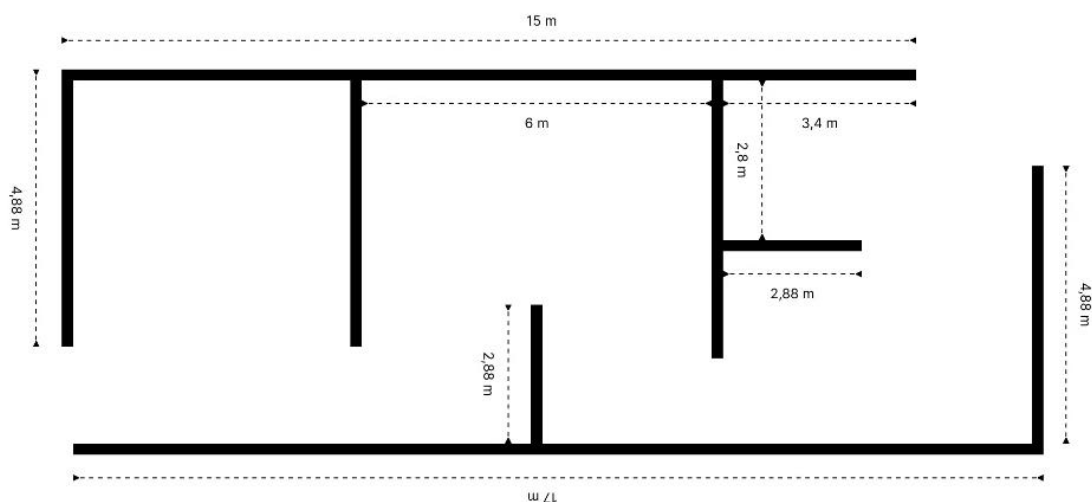


Fig. 4. Museum Exhibition Plan Design

3.3. Develop 3D Design Model

The development of the 3D layout of the exhibition, Figure 5, is carried out by prioritizing aesthetic and historical aspects. In addition, the exhibition's design has been calculated to reduce the likelihood of crowding in the exhibition space. This exhibition applies health protocols by requiring visitors to check their body temperature, use hand sanitizer, and use masks. This post-pandemic condition affects the route of visitors to watch the exhibition, which is one-way. This one-way route also requires the exhibition to pack the chronological plot of

historical stories of the DPR RI buildings. Some of the pictures below, [Figure 5](#), can show the development of the design of the DPR RI museum exhibition.

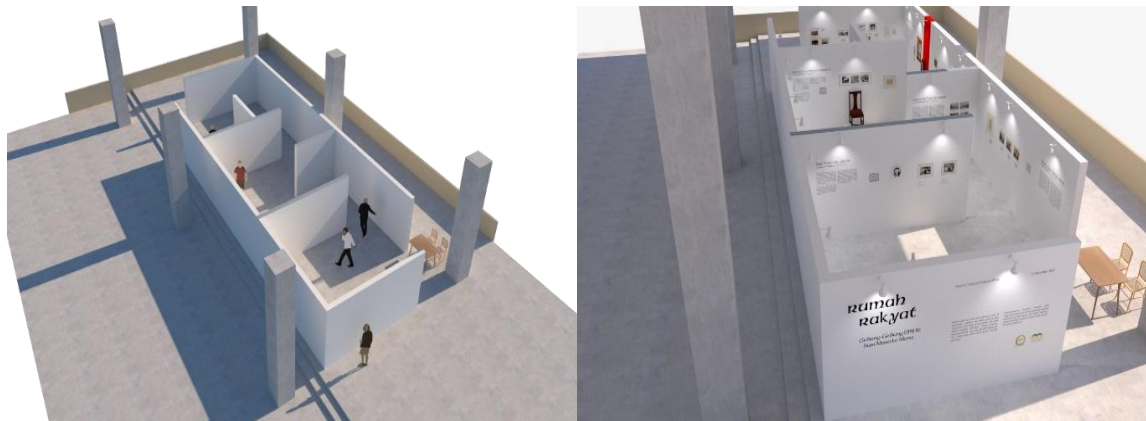


Fig. 5. 3D Design Exhibition Plan, and 3D Design Panel Plan Museum Exhibition

The prologue design welcomes exhibition visitors to enjoy the chronological flow of historical events in the DPR RI buildings. The prologue panel is wide and airy, with the title of the exhibition and a brief description of the exhibition being held. The exhibition's title is particularly bold, with the words "Rumah Rakyat" to attract visitors' eyes to take a deeper look at the exhibition. The use of colour is dominated by black and white in harmony with classic historical content. The display on the prologue panel is minimalist and straightforward, creating a simple atmosphere like a real "Rumah Rakyat" see [Figure 6](#).



Fig. 6. Prolog Exhibition 3D Plan (Rumah Rakyat), and Lapangan Banteng Space Panel with DPR RI Museum Collection

This exhibition the DPR RI museum also shows the collections held in the exhibition. This chair collection is one of the collections stored in the DPR RI museum. As one of the museum collections, visitors to the collection add a touch of red. The photobooth panel is the following side of the panel, made to attract visitors' attention. The photobooth panel seen in [Figure 7](#) results from reconstructing the actual situation. Based on historical sources, namely photo evidence, there is a coffee room usually used by members of the DPR during trial breaks.



Fig. 7. Reconstruction Coffee Room and Coffee Room 3D Design Plan

3.4. Implementation of 3D Design Model Museum Exhibition

The results of implementing the 3D layout design for the exhibition can be seen in Figure 8. Figure 8 shows the display of the exhibition panel layout. The exhibition display is almost identical to the previous 3D model design. The lighting and captions are adjusted to the frame of the building's photographs. The photographs of the old buildings were embossed to make them more attractive. There will also be a workshop and conferences about the upcoming drawing competition for the DPR building, all of which are integral parts of the exhibition. The following is documentation during the activity.



Fig. 8. Layout Museum Exhibition and Layout Coffee Room

Visitors to the DPR RI museum exhibition, which was held on November 2-5, were visited by 731 visitors ranging from school students to general visitors, Figure 9. Visitors' enthusiasm for this exhibition indicates the exhibition's success in establishing communication with the general public. Another agenda item that attracts visitors to the exhibition, as shown in Figure 10, is a museum seminar held to discuss the future aspirations of the museum. A total of 200 participants took part in this seminar.



Fig. 9. Exhibition visitors

The noble purpose of the museum in the future was positively supported in this discussion forum and received a positive response from the seminar participants. In addition, the activity, which was warmly welcomed by the general public, can also be seen in the success of holding a drawing workshop attended by various groups ranging from early childhood to adults. Participants who also attended to enliven the workshop in a series of temporary exhibition activities "Rumah Rakyat" was attended by 49 participants from various age levels.



Fig. 10. Conference of Future DPR RI Museum and Workshop

3.5. Evaluation Museum Exhibition

The evaluation was carried out before the exhibition was held by involving three civil servants of the Indonesian House of Representatives museum culture, two staff of the Indonesian House of Representatives Public Relations and Museum agencies, and two vendors. The validation is done before being disseminated for the exhibition, so the 3D layout design should be feasible. The feasibility of the media is said to be "adequate" or suitable if it is included in the "B" category, namely $X + 0.60 S_{bi} < X + 0.60 S_{bi}$ with an average range of $3.40 < X < 4.20$. The feasibility assessment by this validator uses a scale of five ranging from "very less feasible" to "very feasible." This validation is used as an evaluation material to determine whether the 3D design created for the exhibition with the content produced is appropriate and follows the needs and objectives of the "Rumah Rakyat" temporary exhibition. The assessment indicators can be seen in Table 1.

Table 1. Instrument of Validation 3D Design Museum Exhibition for Evaluation

Category	Indicator
Content Material	Ease of understanding explanations of historical events in the DPR RI buildings The attractiveness of presenting the narrative of historical events in the DPR RI buildings. The ability of material content to provide information to the public Accurate selection of material content with visitors. Interesting historical material for DPR RI buildings
Audio	Voice Over's clarity in narrating historical texts The accuracy of the intonation of reading historical texts Tempo suitability of readers of historical texts The suitability of the background music illustration as a support for historical narrative
Visual	The suitability of the size of the image or photo in the exhibition panel The accuracy of the composition of the exhibition arrangement The clarity of the images on the exhibition panels Lighting suitability The overall appearance of the exhibition The attractiveness of the graphics/images presented Accuracy of colour selection with the theme
Presentation	The suitability of the exhibition display historical chronological elements Appropriateness of work arrangement distance

The results of the questionnaire evaluation given to the experts before the exhibition dissemination process was excellent. Based on the four assessment categories and 17 assessment indicators, two assessment categories received a "very decent" score, including the "A" score category, and the other two in the "decent" category with a "B" grade category. Two categories that received superior ratings were the visual and presentation categories. In the visual category, the highest average value range is 4.48 or $X > 4.20$, with seven assessment indicators providing a feasible and very feasible scale. Meanwhile, the presentation gets an average of 4.21 or $X > 4.20$. The audio category is in scores 4.17 or $3.40 < X \leq 4.20$. In comparison, the material content gets the lowest average range value of 4.07, which is also included in the feasible category. Overall, the acquisition of the assessment evaluation calculation is based on four categories. If the average score is 4.23, it is included in the "very feasible" category with an "A" value. The data analysis is presented in a bar chart in Figure 11.

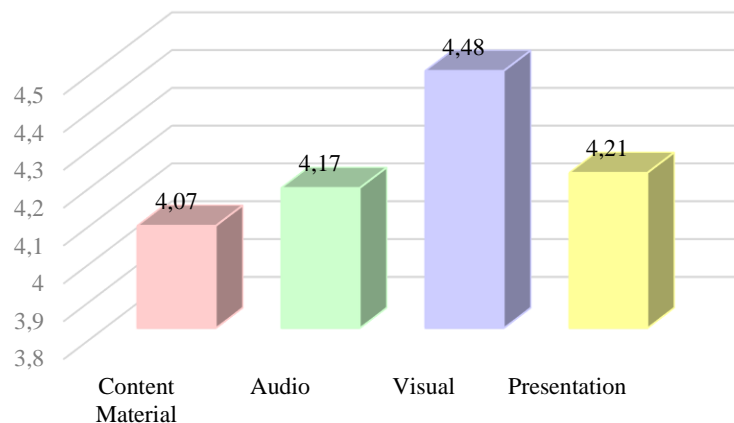


Fig. 11. The Results of 3D Design Museum Exhibition Evaluation

The process of disseminating the exhibition after it was deemed feasible was carried out with the help of vendors and the museum exhibition team. Based on the attendance of 257 visitors regarding the exhibition procurement after the pandemic, they received a positive response. Around 51% of visitors to the "Rumah Rakyat" exhibition stated that this was very effectively held to educate about the Museum of the DPR RI in the post-pandemic era. Furthermore, the results of visitor responses, as much as 26% stated that the exhibition acts as an interactive medium in establishing communication with the public. The interactive communicative aspect was felt by some visitors, who found it easier to understand light and engaging historical narratives. The packaging of presenting historical content that is chronological and interesting in the form of exhibitions can be an alternative event that needs to be held again by the museum. About 1% of the visitors' responses responded in the comments column about their positive appreciation of the series of exhibition events. Visitors also congratulated and hoped the DPR RI museum would continue to hold such events. The following data presentation in the form of a chart can be seen in Figure 12.

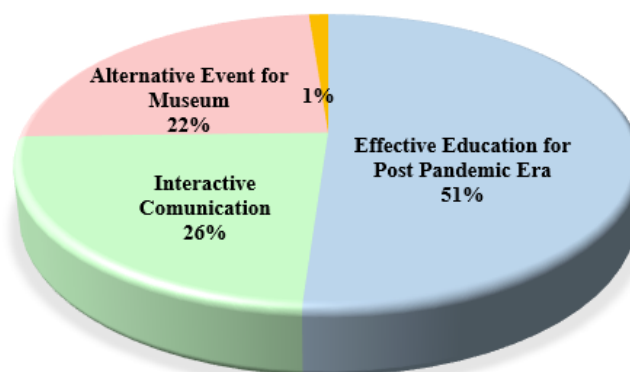


Fig. 12. Visitors Response's Museum Exhibition Post-Pandemic Era

4. Conclusion

The series of research and development (R&D) design of the exhibition exhibition "Rumah Rakyat" goes through five steps; (1) Analysis; (2) Design; (3) Develop; (4) Implementation; and (5) Evaluation. This process aims to come up with a 3D exhibition layout design that has gotten an average score of 4.23 or $X > 4.20$ in the "very feasible" or "A" category. The feasibility assessment based on material and audio content gets an average of 4.07 and 4.17 in the "decent" or "B" category. Meanwhile, regarding visual appearance and presentation, each received an average score of 4.48 and 4.21, namely "very decent" or "A." Based on the response of visitors to the exhibition as a whole, the exhibition held was considered 51% effective in educating visitors. In addition, as much as 26% of visitors also considered the exhibition an interactive medium for communicating information held by the DPR RI Museum. Support of 22% of visitors responded that the exhibition was an attractive alternative event for visitors. The DPR RI museum uses research and development (R&D) results in the form of museum exhibitions to educate and convey information to the public during the Covid-19 recovery phase. Through comprehensive content research and well-prepared exhibition preparation by producing 3D layouts for the exhibition, a series of events for the first exhibition hosted after the pandemic time were held effectively and attracted people interested in learning about the history of the DPR RI.

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