Analysis of Design Paradigms based on Technology Features at Galeri Indonesia Kaya

Andreas Y. Wibisono¹*, Rudy Trisno²#, Fermanto Lianto²
¹Student at Master of Architecture Universitas Tarumanagara, and Lecturer at Department Architecture, Faculty of Design, Universitas Pelita Harapan
²Lecturer at Master of Architecture, Universitas Tarumanagara

*andreas.wibisono@uph.edu
#rudyt@ft.untar.ac.id

Abstract. This study aims to determine the design paradigm at the Galeri Indonesia Kaya (GIK). The paradigm shows how the orientation of a museum in utilizing digital media for delivering information. Knowing the design paradigm is useful for GIK to be more effective in developing ways of conveying messages and how to structure the narrative system. There are three experience design paradigms, namely user-centered experience design, participatory experience design, and agile experience design. GIK is chosen as the object of study because it is a museum that mostly uses digital media. The analysis is done descriptively using data collection methods based on direct observation. This study finds that GIK has a user-centered experience design (UCD) paradigm. This is indicated by the GIK features that fulfill the character of the paradigm. The conclusion in the narrative systems is GIK has an open system that makes visitors have to actively get information but GIK has not been able to make visitors reinterpret information or participate in providing a new information. Beside, with the technology features, GIK has the potency to shift to participatory experience design paradigm and become a democratic museum.

1. Introduction

The main task of the museum is to tell a story [1]. Therefore a museum must have a good narrative system so that visitors can be interested and optimally absorb the stories contained in the museum. This is in line with the human character that constructs or understands reality using story [2]. The question in the museum is what kind of narrative system is effective in telling the story.

There is a tension between creating narratives with closed systems and narratives with open systems. Closed narrative systems that are usually marked by a linear sequence makes it easy for visitors to absorb the story but the visitors become passive agent. While the open narrative system can make visitors actively construct their knowledge. The existence of digital technology allows the museum to form an open narrative system. With digital technology, visitors can experience the story without a clear sequence, so visitors can construct their own meaning [3].

Digital content allows the development of stories and storytelling continuously without end in order to adjust the changes that occur in the future. Digital content can also provide variability for authorship and authority interference in order to provide new narratives to be said and to be heard [4].

The most recent development in the field of digital technology is creating virtual reality and augmented reality. With the advantages of these media, visitors can increasingly create their own narration so that it can mark the end of the storytelling culture with a closed system. But open narration also has its own weaknesses, namely absence of frame (not having a clear point of view), sensation of
presence (cannot feel actual presence), and responsive scripting (visitors can choose their own scenarios) [5].

Though the difference between closed and open narratives, both of them focus on the existence of the museum with an emphasis on visitors, not just aimed at storing objects. The difference is that closed narratives make visitors passive and open narratives make visitors active. Visitors become passive when the museum is planned as a vehicle for creating messages and the museum is tasked with transmitting it to visitors. The success of the museum is measured based on the level of understanding of visitors [6]. Instead, visitors become active when the museum functions as a trigger for knowledge and as a medium of interpretation. In that case, visitors are expected to be able to construct their own meaning, knowledge and experience.

Without questioning the correct narrative system, the most important thing is to be aware of the design direction of a museum and optimize the business according to its orientation. In museum design that uses digital technology, there are three design paradigms, namely; participatory experience design (PD); user-centered experience design (UCD); and Agile experience design [7].

This research will identify a museum called Galeri Indonesia Kaya (GIK) to see what design paradigms are used. Knowing the museum design paradigm will help the museum to develop ways of storytelling according to the goals of the paradigm.

GIK is a case that deserves to be investigated because the whole storytelling uses digital media. With that use, what design paradigm does it use? From the design paradigm, what narrative system is formed?

2. Method and materials

2.1. Galeri Indonesia Kaya (GIK)

GIK occupying a space of 635 m2 on the 8th floor of Grand Indonesia Mall. GIK was presented by Bakti Budaya Djarum Foundation and was inaugurated by the Menparekraf on October 10, 2013. This research views GIK as an example of a museum even though they don’t state it.

GIK has a goal to convey the cultural and natural wealth owned by Indonesia. As a museum, GIK focuses on visitors through focusing on the delivery of stories, no longer storing objects or evidence related to messages. As a museum, it can be classified as an encyclopedia about nature and culture. This type was introduced by Tina Ropolla [8].

GIK carries the concept of digital technology-based edutainment to convey information. The concept of edutainment comes from two understandings: education and entertainment. Edutainment prioritizes fun and happiness in order to achieve learning goals. Through this edutainment concept, GIK has succeeded in impressing visitors with cultural and multicultural information offerings [9].

There are 11 features in GIK that support the multicultural edutainment process: Layar Sapa Indonesia, Video Mapping Wayang, Selaras Pakaian Adat, Melodi Alunan Daerah, Kaca Pintar Indonesia, Jelajah Indonesia, Simulasi Motif Batik, Ceria Anak Indonesia, Live Streaming & Browsing Area, Arungi Indonesia, dan Game Puzzle Batik.

Data about GIK was obtained using the direct observation method. The researcher went to GIK several times then documented the features and made an illustration of the floor plan (Figure 1).
2.2. Method

This research uses descriptive analysis method. Three design paradigms [7] are used as indicators to identify GIK and see how the narrative system:

1. User-centred experience design (UCD): Emphasis on experiences that respond to visitors’ interests and views through methods adapted from a user-centered approach to Human-Computer Interaction.
2. Participatory experience design (PD): Emphasis on process-focused design and inviting visitors to engage in the design experience rather than product-focused.
3. Agile experience design: Emphasis on the needs and goals of visitors and always innovate to offer ever-changing experiences.

The paradigm in design is a package of assumptions, theories, perspectives, methods and procedures that are inherent in the design community and are used as criteria for validating the design. Therefore, each paradigm is elaborated based on the value statement, knowledge production, relations with beneficiaries in design, and design methodologies. Points from each of these characteristics will be an indicator to see what GIK belongs to the design paradigm.

The character value statement is the main value adopted by a museum as the basis for its design. The character of knowledge production is the principle of how a museum conveys its knowledge to visitors. Relation with beneficiaries in design is what are the roles and advantages of visitors in the museum. And finally, design methodologies are how the design methods are used by museums to develop their designs.

3. Results and discussion

This study analyze GIK based on the indicator in four characteristic. Based on the analysis, GIK is a museum with a User-centered experience design (UCD) paradigm. This is described through the four characteristics of the UCD paradigm reflected in GIK.

The character value statement on UCD means that it can provide a pleasant experience and can provide useful features according to the context. At GIK, this is reflected in the use of digital features. Most of the features on GIK use interactive digital technology that keeps visitors entertained. There are three interactive digital features:

1. Video with motion sensor. The example is Layar Sapa Indonesia. When visitors pass in front of the screen, the image of a couples in traditional clothing from a certain area greets the visitors.
2. Interactive digital image that adjusts body movements. The examples are Selaras Pakaian Adat and Arungi Indonesia. On Selaras Pakaian Adat, visitors can choose several kinds of traditional clothes and they can watch their appearance wear the clothe on the screen. At Arungi Indonesia visitors can move their bodies to move digital aircraft on the screen to find out information on each island in Indonesia.

3. The touch screen is applied to features like Melodi Alunan Daerah, Simulasi Batik, and Kaca Pintar. In these features visitors can choose what information you want to display. In Batik Simulation visitors can make their own batik patterns and then print them in postcard format.

The character of UCD knowledge production means that information is still sourced from curators or designers. In GIK, even though the visitor can choose what information he wants to enjoy, the truth of the information is provided. Visitors cannot add new information as in the participatory experience design paradigm and cannot change quickly as in the agile experience design paradigm.

The character of relation with beneficiaries in UCD design means that visitors are referred to at the design stage. To be able to find out the actual role of visitors requires in-depth interviews with the GIK. But from the viewer’s perspective, the features of GIK have adjusted the character of the visitors. This is marked by some freedom of flow and interaction that can be chosen by visitors.

It also marks how the character of the design method used in GIK which focus the design on the visitor’s experience. This is also reflected in the concept of GIK namely edutainment where the delivery of information, in this case is education, must be fun for visitors.

GIK does not belong to the participatory experience design paradigm because there is no visible feature in knowledge production that allows visitors to add knowledge about the theme of the museum. GIK is also not included in the Agile experience paradigm because since it opened in 2013 until this research was made in 2020, there was no significant change in the information displayed, while the characteristic of the agile experience design paradigm is rapid changes in responding to visitors.

With its character, GIK has an open narrative system where visitors can become active in getting information. However, because all information contained in GIK is sourced from museum authorities, the opportunity to interpret messages in GIK is small. Visitors in GIK are free to choose the path and information but have no free interpretation because all information is clear.

4. Conclusion
GIK has applying user centered experience design (UCD) paradigm. GIK has become a museum that focuses on visitors but based on the design paradigm it is only in the first stage. At this stage, GIK has an open narrative system which makes visitor active to find the information but visitors have a little chance to construct their interpretation.

As a museum that uses digital technology, GIK has the potency to shift to the paradigm of the participatory experience design and agile experience design stages. By adopting those design paradigms, GIK can convey knowledge in a participatory and constructive manner. This can be an example of a good museum in Indonesia. The participatory design paradigm can also make GIK an example of a democratic museum, in accordance with the ideology adopted by Indonesia.

This research can be continued with the method of obtaining deeper data through interviews and analysis of the design process to get a more detailed character. This research can also be an example to describe several museums in Indonesia to find out how effective the digital technology in museum design is related to the character of visitors.

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