

Educational Media Of Ancient History Through Interactive, Evocative, And Interactive Display Design For Sangiran Museum Krikilan Cluster

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Abstract.

The Sangiran site is one of the most important prehistoric sites in the world, more than 50% of hominid fossils are found in this area and has extraordinary importance because it is considered a complete ecosystem laboratory consisting of geology, palaeontology, palaeobotany, and archaeology (ICOMOS, 1996). By UNESCO, the Sangiran Ancient Human Site was designated as a World Culture Heritage on 5 December 1996 in Merida (Mexico) by the World Heritage Committee with number C593, since then Sangiran has belonged to the world and has become one of three centres of ancient human evolution in addition to similar sites in Africa and China. Preservation of cultural knowledge through cultural knowledge by designing the Museum as a centre of information and cultural preservation. A museum through the exhibition system (museum display system) to convey information. The use of museum display facilities, tailored to the needs of the museum and the type of collection to be exhibited. The museum display system enables information communication. In the display system, objects are placed in displays with interpretations that can explain their meaning. The use of supporting facilities, also known as museum displays, is tailored to the needs and type of museum collection to be exhibited. To display a collection of artefacts about ancient human history, Sangiran Museum Krikilan Cluster uses three presentation approaches: intellectual approach, romantic (evocative) approach, and interactive approach. The aim of this design is to determine an alternative display system in the exhibition space of the Sangiran Museum Krikilan Cluster to attract more visitors, both local and foreign.

Keywords : Sangiran Museum, Antiquities, Displays, Education and Tourists.

I. INTRODUCTION

Museums are places for people to learn and gain knowledge, especially about history and culture. Basically, museums are made to commemorate various events in the past by displaying abandoned objects and documents. The museum is a place for storing, maintaining, securing, and utilising material evidence of culture in terms of cultural products and their environment to support the protection and preservation of the nation's heritage. Museums are one of the historical places that can be visited to learn about historical relics. Museums are places that are open to the public. Museums collect, care for, and present the cultural heritage of society for the purposes of learning, research, and recreation (Hansson & Öhman, 2022). Although museums are not included in formal education, they have a close relationship with education. Museums mostly attract the attention of the public because they can be used as a source of learning. For education, museums are very important. Museums are very important in education as a learning platform because they are non-formal educational institutions. Museums are also suitable for every level of education such as elementary, junior high, high school students. Specifically, acknowledging historical places for public is important because their collections have diverse historical values (Sutarga, 1997). The Sangiran ancient human habitation in Sragen Regency is considered a leading tourist location. Sangiran is designated as a world cultural heritage and represents 1.8 million years of uninterrupted cultural and early human history. It is also one of the three centres of ancient human evolution, along with similar locations in Africa and China. The designation of Sangiran as a flagship destination is intended to increase the number of foreign tourist arrivals, which is targeted to reach seven million people this year.

Cultural heritage conservation encompasses current and future socio-environmental needs, linking cultural heritage conservation efforts with the surrounding community (Maryono et al., 2015). Sangiran Museum, as a cultural heritage site, must be able to improve the welfare of the surrounding community by maintaining its sustainability. The Sangiran Site has Museums spread across four clusters, namely Krikilan Cluster, Dayu Cluster, Bukuran Cluster, and Ngebung Cluster, during its development. Museum displays

should not only be attractive, but should also help visitors communicate with the collections (Hansson & Öhman, 2022). In addition to communication, collectibles must be able to be well supported and cared for in order to be preserved. Today's museums are evolving, and the means of display are also becoming more varied. Audiovisual tools, interactive touch screens, and interactive spaces are some examples of existing display tools (Utomo, 2008). In this sense, visitors should have the opportunity to see objects from new perspectives, understand the content and purpose of objects, gain new items, experiences and knowledge, and participate in interactions within the museum. This interaction can occur through various means, such as interactive spaces where visitors can view videos or watch films (Ahmad et al., 2014). Museum display systems that enable the communication of information. In the display system, objects are placed in displays with interpretations that can explain their meaning. The use of supporting facilities, also known as museum displays, relate to the needs and types of museum collections to be exhibited. The purpose of this design is to determine an alternative display system in the exhibition hall of the Sangiran Museum Krikilan Cluster to attract more visitors, both local and foreign.

II. METHODS

The design of the display of the artefact collection in the Sangiran Museum Krikilan Cluster uses a design method starting through data collection based on primary and secondary data which will be analysed using descriptive qualitative methods and SWOT analysis. This is useful to draw conclusions by means of obtaining the collections regarding to display designs that contain ergonomic aspects and functions that will be made tailored to visitor segmentation (Hasanah & Prilosadoso, 2020). The method of implementing ethnography in the field of interior design here is about observing human work behaviour (observing what people do) as a socio-cultural point of view (participatory design) in the form of competence in creating and producing (what people make) which is integrated with elements of local wisdom-based science (Prilosadoso, et al. 2021) which can be absorbed through direct interviews (traditional interviewing) based on the basic abilities of certain cultural communities (what people say they do). These two elements are rules that can be covered in the field of macro ergonomics. Thus, ergonomics studies that include cultural values can be referred to as ergocultural, which is a convergent element with ethnographers to reveal the veil of science and technology owned by a society. The interviews conducted were open interviews. In this sense, they allowed informants to answer questions and provide views freely and openly and made it possible to ask in-depth questions.

Furthermore, observation is a method of questioning the person being asked directly and documents from books or magazines for additional data collection (Sriwahyuni & Prilosadoso, 2020). Informants were determined purposively, which is a type of sampling that is based on the researcher's judgement or judgement with the assumption that the selected informants are representative of the population. Informants were determined in chains from respondents appointed by the first informant who had been interviewed. This method is called the snowball sampling technique. For interviews, this research used a structured interview method, by sending questions via email to the interviewees. To collect field data, this research conducted thorough participatory observations assisted by means of interviews to several museums in Surakarta. An important step in designing an interior, especially the display of the Sangiran Museum collection, is programming. Programming is the first step in designing. In the process of making programming, initial research is carried out on the object to be designed. The designer must do a complete research at this stage. In addition to research, the designer must find information as complete as possible and then analyse the information, identify existing problems, and solve them to get the results that the client or user wants. In programming, the designer can conduct interviews with users to find out the needs and desires of users aesthetically and functionally (Botty, 2017).

The design process was carried out by making a sketch drawing design, then continued using a computer with the Google Sketchup program media from the first (alternative) and second (selected) stages of design so as to produce the most suitable design for displaying collections that are in accordance with ergonomics and culture on display at the Sangiran Museum. Based on the design of the drawing, a mock up of the display was made in accordance with the ergonomics of the location. Display is a tool to provide

information to operators or visitors in order to create an environment where an operator understands information and convey information by seeing and facilitate this program. So that the realisation of information that develops in the company in order to create a regulation or information in the form of a display. What is meant by this display is an environment that communicates its state to humans (Sutaksana et al., 2006). The following characteristics of a good display and attract visitors must have several criteria, as below, namely:

1. Can convey a message.
2. Interesting shapes and images depict events.
3. Use striking and attention-grabbing colours.
4. The proportion of images and letters allows them to be seen or read.
5. Using short-effective sentences.
6. Using appropriate fonts that are easy to read.
7. Realistic according to the problem.
8. Not boring.

III. RESULTS AND DISCUSSION

A. Sangiran Museum

Sangiran Museum is located in Sragen, Central Java, which is an archaeological museum with a complete collection of ancient human fossils both in Asia and in the world. The museum with the motto "The Homeland of Java Man" provides complete data on the life of ancient humans, from the place of residence, the pattern of life during the hunting and gathering period. Sangiran Museum will provide information about the landscape from the late Pliocene period to the late Pleistocene period or about 2 million years ago. Administratively, the museum is located in Krikilan Village, Kalijambe District, Sragen Regency, Central Java. The Sangiran Museum collection consists of more than 13,809 fossils, of which about 2,934 are exhibited in the museum's exhibition room, and the rest are still kept for research. Some of Sangiran's ancient human fossils are stored at the Bandung Geological Museum and the Yogyakarta Palaeontological Museum. Not surprisingly, the large number of fossils in Sangiran makes it the most complete museum in the world. UNESCO even gave the status of World Heritage List in decision number 593, document WHC-96/Conf.201/21 in 1996. Here is a picture of the collection display at Museum Sangiran Krikilan Cluster.



Fig 1. Display of Sangiran Museum Krikilan Cluster.

The Sangiran area has a peculiar condition where it was once a large marine area. However, geological processes and volcanic eruptions such as Mount Lawu, Mount Merapi and Mount Merbabu caused the Sangiran area to turn into land. This resulted in the Sangiran area having a different type of soil layer from other areas. The discovery of marine animal fossils in the lowest layer indicates that the Sangiran area was once a sea area. The discovery of ancient human fossils in Sangiran cannot be separated from a paeoanthropologist named Gustav Heinrich von Koeningswald who conducted research in 1934. He was the first discoverer of the ancient human fossil *Pithecanthropus Erectus*. The Sangiran Site area is an interesting

scientific tourist attraction. Its tourism potential is quite high for science and is a very valuable asset for the Sragen Regency government. Since this area was designated as a "World Heritage" by UNESCO, it has received a lot of attention. Sangiran is very important for science in the world, especially archaeology, geology, palaeoanthropology, anthropology and biology. Therefore, the potential of Sangiran Site can be developed, among others.

1. Condition of the Sangiran Museum (Krikilan Cluster) Spaces and Collections

The museum is located in Krikilan Village, Kalijimbe, Sragen and houses all the fossil finds in the Sangiran cultural heritage area, built in 1980 with an area of 16,675 m². The building, consists of :

- a. Showroom, the main room where the collection is exhibited/displayed.
- b. The Laboratory room, where the conservation process of the fossils found is carried out.
- c. Meeting Room, a room used for all activities held at the museum.
- d. Library, a storage room for a collection of books.
- e. Storage Room, a room used to store the fossil collection.
- f. Mushola
- g. Toilet.

The total collection currently stands at 13,806 pieces, which are stored in two places: 2,932 in the display room and 10,874 in the storage room. This is due to the limited space available in the display room, but now a showroom has been built.

2. Audiovisual

This room was built specifically for the screening of films about prehistoric human life. This serves to complement the information obtained by tourists who have witnessed fossils from prehistoric life in Sangiran.

B. Museum Collection Display

The collection objects contained in the museum must fulfil certain criteria and requirements. The requirements for museum collections include:

1. It has historical and scientific value as well as aesthetic value.
2. It can be identified in terms of its form, type, style, function, meaning, and historical and geographical origin, generation, and period.
3. It can be used as a monument or will become a monument in natural and cultural history.
4. It must be able to serve as a document, in the sense that it is evidence of its reality and existence with the research.

Original objects, replicas or reproductions that are legal according to museum requirements. (Museografika. Directorate General of Culture, Directorate of Museums, Ministry of Education and Culture, 1998). In general, the spatial organisation is divided into five zones/areas based on public presence and the presence of collections/displays. These zones include:

1. Public Zone-No Collection
2. Public Zone-With Collection
3. Non-Public Zone-With Collection
4. Collection Storage Zone

The results of various literature reviews, observations, interviews, and visual references have resulted in several alternative display designs for the Sangiran Museum Krikilan Cluster collection. Alternative design number one is adapted to the presentation method at the Museum of Ancient Humans Sangiran Krikilan Cluster, using an intellectual approach, a romantic (evocative) approach, and an interactive approach. In the future exhibition space, the intellectual approach is used to display replicas of the research results of some fossils, posters featuring scientists and important figures, and information boards of the collection. This way of presenting objects in the museum collection aims to provide information about their use, meaning and function. In addition, visitors are also easier to get information without having to be accompanied by the museum manager or tour guide. The romantic (evocative) approach method is applied in the presentation of the excavation diorama that describes the excavation activities by archaeologists that have been carried out in the Krikilan area, such as the appearance of alternative design 1 in the picture below.



Fig 2. Alternative Design of Display 1 of Sangiran Museum Krikilan Cluster

To display a collection of artefacts about ancient human history, Museum Sangran Krikilan Cluster uses three presentation approaches: intellectual approach, romantic (evocative) approach, and interactive approach. By using this intellectual approach, information about the purpose, meaning, and role of the museum collection objects can be revealed. In museum showrooms, this method can be used to display replicas of specific fossil findings, important information about scientists' processes and discoveries, as well as important figures and information boards from the collection. The excavation diorama is made using a romantic (evocative) approach so that visitors can see the process of fossil excavation from beginning to end carried out by archaeologists in the Krikilan area.



Fig 3. Alternative Design of Display 2 of Sangiran Museum Krikilan Cluster

IV. CONCLUSIONS

In order to display a collection of artefacts about ancient human history, Sangran Museum Krikilan Cluster uses three presentation approaches: intellectual approach, romantic (evocative) approach, and interactive approach. By using this intellectual approach, information about the purpose, meaning, and role of museum collection objects can be revealed. In museum showrooms, this method can be used to display replicas of specific fossil findings, important information about the process and discoveries of scientists, as well as important figures and information boards from the collection. The excavation diorama is made using a romantic (evocative) approach so that visitors can see the process of fossil excavation from beginning to end carried out by archaeologists in the Krikilan area. Meanwhile, to use the interactive approach, the Museum of Ancient Man Sangiran Krikilan Cluster will build several computers in each exhibition room. This will help visitors understand the collection more easily and give them the freedom to choose how much information they want to know. One way that museum visitors can interact directly with the collections on display is by providing interactive digital collections that use audiovisual information technology. This allows visitors to explore more about the information on display. The design of this display is expected to further improve the display of the Sangiran Museum Krikilan Cluster collection to make it more attractive and interactive so that it can increase the number of tourists both from foreign and local, as well as increase knowledge and insight into the history of prehistoric times.

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