

Omah Kaktus Interior Design With Biophilic Concept In Bandung

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Abstract

Omah Kaktus interior design is an educational facility that provides a facility or place that can accommodate and facilitate cactus cultivation business activities for MSMEs and cactus farmers. Aims as an attractive educational and tourist facility for the community, especially in the city of Bandung. This facility is expected to be an educational facility that is able to accommodate cactus cultivation and management of the benefits of cactus by providing various information, education and recreation for visitors. The formulation of the problem of this design is how the interior design of Omah Kaktus can be an economic driver facility for the local community and tourism that is attractive to visitors and can provide a variety of information, education, and recreation for visitors with a biophilic concept that creates rooms in buildings that have a natural impression and foster positive relationships between humans and nature. The purpose of this design is to meet the needs of educational facilities and economic drivers as well as recreational facilities, or can be called edu-tourism, which has workshop facilities, galleries, souvenir shops, cactus gardens, laboratories, and cafeterias. This facility is a public facility that targets the public, cactus farmers, and SMEs. The design location is in Lembang District, West Bandung Regency, West Java. which is an MSME area for cactus sales by local residents.

Keywords: *Cactus, Eduturism, Economy, Biophilic*

INTRODUCTION

Ornamental plants function as air pollutants absorbers so that they can make the surrounding air clean (Widyastuti, 2018). Ornamental plants, including cacti, have high economic value, making them very attractive for cultivation. Lembang Bandung cactus farmer Aldi said that he opened a cactus plant business, because it has high economic value, so this business is very promising (Pertanianku, 2020). Sales of cactus plants themselves increased by 50% in 2021 (Katadata, 2021). Therefore, the cultivation of ornamental plants, including cacti, has an important role in the Indonesian economy.

Cactus is known as a plant that can grow in very low rainfall conditions and does not require special treatment in its care. According to (Rismunandar, 1994), cacti not only grow in desert areas, but can also grow in very cold and snowy areas such as mountains. Cacti also have various benefits, such as being used as a source of food and beverages, and have benefits in traditional medicine, for example, extracts from prickly pear fruit have anti-cancer properties, and contain many antioxidants in the fruit and vegetative parts of various cactus varieties, mostly *Opuntia* (Chandra Rashmi, 2019).

The Lembang area in West Bandung Regency is not only a vegetable center. Cactus plants, known as plants in dry or desert areas, are cultivated by farmers in Lembang, which has a cold temperature. There are more than 1,500 types of cactuses cultivated in the Lembang and Parongpong areas. In Lembang, the centers of cactus cultivation are Langensari, Pagerwangi, Cibodas, Wangunharja, and Cikidang. In Langensari Village, Lembang, many farmers cultivate cactus species and businesspeople make cactus as their livelihood (Arsas, 2019).

The cactus plant cultivation business is also in great demand by businesspeople throughout Indonesia. They make cactus plants as a job, and usually this business starts from a sense of personal interest in cactus plants so that a community of cactus lovers is created. One of the business activities of cactus lovers is channeled through events that are generally held at home. A community of cactus lovers cannot promote their cultivation optimally if there is no place with complete facilities and infrastructure. This problem is experienced by many cactus lovers and farmers in Bandung, resulting in unsatisfactory sales targets. Limited space and the placement of tables close together make circulation limited and the number of items that are not placed regularly can make visitors uncomfortable. These findings are things that must be improved in terms of interior facilities.

Based on some of these problems, a solution is needed to create an interactive and informative educational facility, recreational facilities, and adequate commercial facilities related to cactus plants. The solution is to provide a cactus house interior design that supports the educational system through workshops, information system through galleries and commercial through souvenir shops. Biophilic design allows people to work in a healthy place, minimize stress, and have a prosperous life by integrating nature, both with natural materials and natural forms in design. In addition, biophilic design seeks to create a good habitat for humans in contemporary environments by supporting human health, wellness, and well-being (Kellert S. R., 2015).

Biophilic design in its application contains six major elements that can be used to integrate biophilic into design, including interior design. Furthermore, the six elements of biophilic design contain 72 design attributes that are practical examples of how the major elements are applied in the built environment (Kellert S. R., 2015). Some elements that will be applied are environmental features including color, water, air, sunlight, plants, and natural materials. Natural forms include botanical motifs, ovals, and curves in spatial elements. Natural patterns and processes include sensory, information richness, and synergized space. Light and space includes natural, reduced light, shadows, and spatial harmony. Relationships in space include geography. Human-nature evolutionary relationships include safety that provides psychological calm, attraction, and beauty. This is what gave rise to the idea to design the interior design of "Omah Kaktus" with the concept of "Biophilic" which provides a comfortable atmosphere, and which can accommodate eduturism activities, namely with a design concept that is connected to nature. Biophilic design aims to restore the relationship between humans and nature, so this concept is an appropriate application in the interior of "Omah Kaktus".

METHOD

The research method used in this design is the case study method, which is a research method that conducts in-depth research into a phenomenon by observing, collecting data, analyzing information, and reporting the results of the research. The results obtained are presented in the form of an in-depth understanding of a phenomenon that occurs and becomes the basis for the next stage of research. The design method applied to Interior Design is compiled based on references by David K. Ballast (Ballast, 1992).

The following design process that will be applied includes programming, which functions as the development of design concepts that are in accordance with user needs. Furthermore, data collection is carried out through the informant method, which includes the environment of architects and interior designers as objects, considered to cover the information contained in the design; archives and documentation used as literature are writings, articles in tabloids, magazines to official websites related to design; Observation is carried out to obtain related field data on several examples of similar buildings such as museums, plant houses, greenhouses and others; and documentation is carried out to store evidence and accurate data on an activity. The attachment of physical data with visual media will greatly help the design process being worked on. Documentation is also useful for providing visual data to clarify the delivery of the design.

The data obtained is then analyzed to formulate a schematic concept consisting of zoning carried out by dividing the space into 4 areas including the service zone, public zone, semi-public zone, and private zone based on the function of the existing space; grouping, spaces that have been identified by the type of zone are grouped together according to the four zones that have been written; the amount of space is obtained based on the needs of each room according to the function, furniture, circulation of movement and the needs of the amount of users in the room; the organization of space in one zone is organized according to the needs of each space; consideration of the flow of human circulation in the room is very important to support user comfort but not reduce the aesthetics of space; and the pattern of relationships between spaces is made based on the relationship between spaces, either directly related, indirectly, or not related at all.

RESULT AND DISCUSSION

In supporting educational and economic activities, the biophilic concept will be applied to Omah Kaktus with the aim of producing a space that can participate in improving the welfare of human life physically and mentally by fostering a positive relationship between humans and nature. According to (Almusaed, 2011) biophilic is a concept that seeks to minimize the negative impact of heating in urban life on a local micro scale that allows humans to be able to increase the level of physical comfort and improvise the health of humans themselves. Several principles are contained in the theory of biophilic design to be applied in building design, one of which is expressed by Terrapin, in his book, 14 Patterns of Biophilic Design. All these principles are grouped into three main groups, namely Nature in the Space, Natural Analogues, Nature of the Space.

The theme aspects used in this building relate to biophilic elements and patterns which are then developed and applied to each space and its function. One aspect of nature in this concept is plants. The plants here certainly use cactus whose habitat will be applied in the theme with a touch of "desert modern" style in the form of a desert atmosphere so that it can produce the impression of the cactus habitat itself and provide new experiences for visitors.

The theme applied to the elements of the space includes the use of natural materials such as stone, wood, and glass for walls, floors, and roofs (Figure 1); the use of desert-inspired colors such as beige, brown, brick red and green. This will create a cool feel that is in keeping with the natural environment; the use of dynamic and repetitive lines on floors, roofs, walls and furniture; the abundance of openings to take advantage of natural daylight and add natural scenery as a backdrop; the use of energy-efficient technologies, such as efficient air conditioning systems and energy-efficient lighting to maintain the well-being of the

environment; the availability of open areas such as open spaces as communal spaces; and designing spaces in a way that is mindful of privacy, and creating designs that are able to create a balance between privacy and connectivity with the natural environment.



Figure 1. The Application of Cactus Motifs, Curves and Natural Materials
 Source: Fitri Marati Sholihah, 2024

There are several ambiances that will be created in this design, namely a natural and relaxed atmosphere, a desert atmosphere but still cool, and a comfortable atmosphere. The natural and relaxed atmosphere is raised in the cactus garden area and open space as a communal space or gathering place equipped with seating facilities on the outside of the cafe so that visitors can relax while ordering food and drinks (Figure 2).



Figure 2. Greenhouse and Open Space Source: Fitri Marati Sholihah, 2024

This building uses floors dominated by brown and ash colors. In the toilet and prayer room area using ceramic floors. In the lobby area, laboratory, gallery, souvenir shop, reception and counter use epoxy floors. This is to create a clean and modern impression but still looks natural. The cafeteria area uses a combination of terazo and natural stone floors. Parquet floors are used in office areas and workshop rooms to create a comfortable atmosphere when working or during workshop activities (Figure 3).

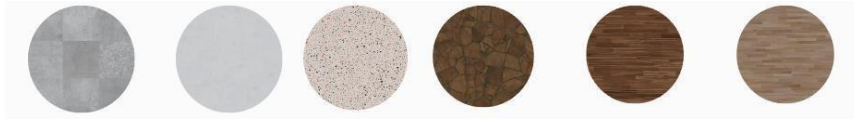


Figure 3. Flooring Materials
Source: Fitri Marati Sholihah, 2024

The walls use natural colors. The materials used are natural stone, stucco finishing walls, glass walls, terracotta colored paint finishing walls, beige, white, green. The ceiling used in the building includes conventional ceiling, suspended ceiling, upceiling, downceiling, and foam ceiling. The materials used are gypsum, wood and panels (Figure 4).



Figure 4. Wall Materials
Source: Fitri Marati Sholihah, 2024

The use of dynamic and curved shapes can support the concept. In addition, these shapes make the building feel unique and give a different impression to visitors. The materials used in the furniture are anonymized by wood materials, besides that there are ceramic materials, gypsum, foam, and suede fabrics. In some corners of the room, cactus-shaped sofa installations are placed, this is to prevent visitors from fatigue when walking around the building (Figure 5).

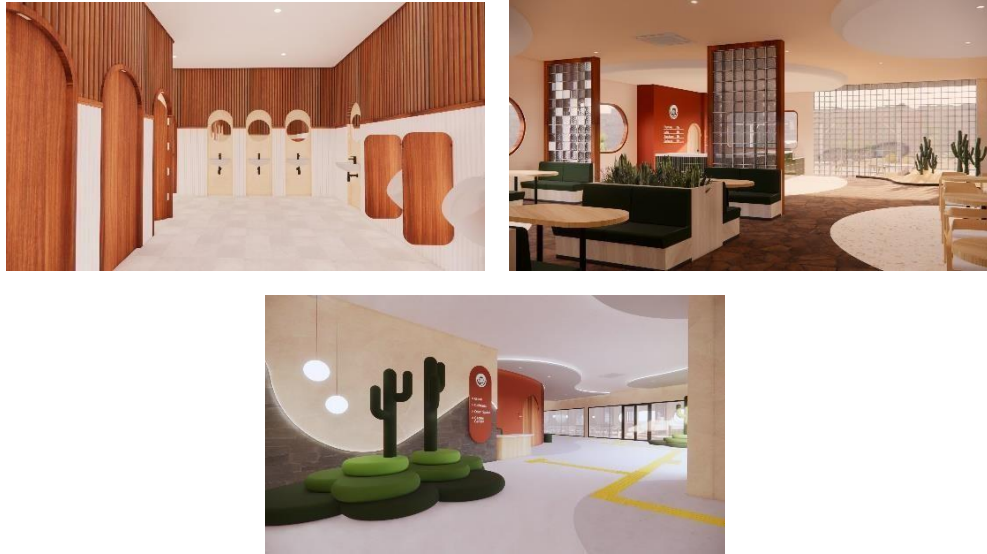


Figure 5. The Applications of Wood Materials and Cactus Shaped Sofa Installation Source: Fitri Marati Sholihah, 2024

CONCLUSION

The interior design of Omah Kaktus in Bandung is a design that aims to be an educational, recreational, interactive, and informative tool as well as a commercial tool. This educational system facility is facilitated through workshops, then continued with interactive and informative recreational system facilities through galleries and commercial facilities through souvenir shops.

The interior design of Omah Kaktus uses the Biophilic concept which aims to foster a positive relationship between humans and nature, increase work productivity, creativity, concentration and focus and increase calmness. These goals are based on the patterns and principles of the biophilic concept as well as biophilic elements applied to buildings such as environmental features (natural materials, the presence of plants and the presence of water), natural forms (curved shapes, and botanical motifs) in each interior element, natural patterns and processes (spaces that synergize with each other), light and space, relationships based on space (the relationship between the geography of Bandung and cacti), and the evolutionary relationship between humans and nature (calmness, beauty). In addition to the concept, this design also uses a modern desert theme in the form of a desert atmosphere so that it can produce the impression of the cactus habitat itself and provide new experiences for visitors.

This application is expected to be a solution in the design of Omah Katkus interior design, namely by providing facilities that are feasible and suitable as a means of education, recreation, information and commercial about cacti in a new perspective.

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