

Design of Children's Creativity Center In Medan City With Green Architecture Concept

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ABSTRACT

This journal is made for us to know how important a place is for our future kids to find knowledge easily. Therefore, the children who are still hesitant to know where to go can find the place convenient. The large number of children within Medan city for the availability of facilities that the development of children's creativity not directly proportional shows that this needs to be considered, especially since curious is a period of growth stimulation that can affect future growth and development. To resuscitate and tell other people how important for us to know, that future kids will suffer for knowledge. The main problem for them is the ignorance of themselves to find out where they can find the receptacle to head to. Therefore, it is necessary to design facilities for a Children's Creativity Centre in Medan City that can meet the needs of conditions and can accommodate recreational and educational activities for children that can affect children's development with a Green Architecture approach. This research uses qualitative descriptive methods through field information and literature studies. This building applies the Green Architecture concept in the form of saving energy, being way more flexible with climate, keeping it safe for the site, and respecting the people nearby. So that this design can be a forum for children's creativity, which is expected to respond to the condition of children both physically and psychically, which can improve children's creativity.

Keywords: children, creativity center, green architecture

1 Introduction

Medan is the third largest city in Indonesia. In 2020 the city of Medan had 2.44 million inhabitants, of which 585.92 thousand or 24.06% of the total population were children [1]. Although it has a fairly large population of children special facilities for child growth and development that are truly representative and facilitative that can accommodate all children's activities in the city of Medan are still insufficient and have poor conditions [2]. As a child, the period of growth in childhood is a period that plays a very important role in determining the qualities of a child [3]. One of the factors that can help shape the quality of children is to instill creativity in children from an early age [4]. The thing we can do to recognize and encourage creativity is to provide adequate education [5]. Providing facilities to children inside the form of Children's Creativity Centers can help children in exploring their creativity and shaping children's character for the future. Responding to facilities that meet the needs of children by the needs of the city of Medan today, Medanstrives to make it happen by providing child-friendly facilities in many parks in the city of Medan [6].

Cadika Park is one of the parks with a wider area compared to other parks in the city of Medan, this park also has a lake in its territory [7]. The beauty of this park is still felt to be lacking if it cannot be enjoyed by all circles, such as children. This can happen because this park still lacks special facilities for children that can

accommodate activities to train children's creativity through education and recreation. Thus, in order the needs of the residents in Medan City children for special infrastructure for the growth and development process that can accommodate various activities and can hone children's creativity through education and recreation that is still lacking, establishing a Children's Creativity Center in the Cadika Park area of Medan is considered necessary. Apart from these considerations, the establishment of a Children's Creativity Center in the Cadika Park Medan area can realize the wishes of the Medan city government which wants to add child-friendly facilities in several parks in the city of Medan as well as make Cadika Park Medan can be enjoyed by all circles.

Children's Creativity Center is a place that can accommodate various children's activities to improve intellectual intelligence, emotional intelligence, creating and innovating, and as a place for activities that can shape children's personalities [8]. The facilities, facilities, and infrastructure that are set can stimulate the development of creativity. According to Kaplan and Kaplan, it is said that space is one of the external factors that can trigger creative expression. The setting is the interaction between activities, activity actors (children and teachers/caregivers), activity space, and time [9]. Creative play is an activity that gives children the opportunity to create, explore, and express their feelings both with tools and not [10]. Taman Cadika Medan is a camping area for the Medan City branch of Scouting activities. This park is managed directly by the Medan City Government to be used as a city park and green open space [11].

Green Architecture is a concept that attempts to minimize the possibility of harmful things to human health and the environment surrounding it [12]. Green Architecture is an eco-friendly architecture that focuses on energy efficiency, sustainable patterns, and a holistic approach to the earth's nature [13]. The Green Architecture Concept is to prevent some damaged impacts on nature and people's environment and produce better and healthier living quarters, it's done by building some utilizing energy and natural resources. The 'Green Building' concept is to build some structure and use environmentally responsible processes and efficient resources throughout the buildings [14]. Green Architecture has 6 principles, this is obtained from the book Green Architecture Design of Sustainable Future by Brenda and Robert [15]. The principle of Green Architecture is Conserving Energy: This principle uses energy correctly and precisely. A good building needs to consider energy consumption before and after construction. The design of the building must be able to influence and adapt to the environment.

Working with Climate: Working with climate is done by utilizing climatic conditions, nature, and the surrounding environment in the form and operation of buildings. Respect for Site: Planning refers to the interaction between a building and its location. Its purpose is to ensure that the building does not harm the environment in terms of construction, shape, and operation. Respect for the User: Green architectures and users have a tight relationship. The necessity for green architecture must consider the wellbeing of the building's user or inhabitant. Limiting New Resources: When designing a building, existing materials are maximized and the usage of new materials is kept to a minimum. Holistic: To create a holistic architectural design, the five points mentioned above must be combined into one. The tenets of green architecture are connected and interdependent.

2 Method

The design problem-solving method using descriptive research. Descriptive information is a base of research shown to describe existing possibilities, natural and man-made. Through this method, researchers collect data in 3 ways, namely [16]. Literature review or literature studies through related journals in this discussion, the determinate object of study, analyzing data is to examine the relationship between data between theories in the study literature and the object of study, the site selection method for the Children's Creativity Center project is carried out through literature studies and surveys, and the literature review in question is to find out about locations that are by land use and building functions based on the Regional Spatial Plan (RT/RW).

3 Results and Discussion

3.1 Location Description

The main title for this project is the Design of a Children's Creativity Centre in the Cadika Park area of Medan with a Green Architecture Approach which functions as an educational and recreational facility for children in the city of Medan to further hone their creativity. The design location of this Creativity Center is in the Medan Johor district, Medan city. The existence of this area is the form of privately owned Green Open Space managed by the Medan City Government, with the total area reaching ± 25 Ha (Figure 1).



Figure 1. Project Location

Source: Google Earth [17].

3.2 Basic Concept

The base form in the concept of designing this project applies the concept of Green Architecture with consideration of responses to the climate and environmental context as well as responses to users. The response to climate and environment is carried out by applying the concept of buildings that are by the tropical climate and also taking advantage of climatic conditions and the environment of the site. Meanwhile, the response to users is carried out by applying the playful concept. Of course, this concept is closely related to the objects of building users, namely children. One of the functions of the child's creativity center is to entertain and make children feel creative, so it needs to be made as cheerful as possible so that children can be interested and comfortable outside their homes. Based on the picture Figure 2 above we can see that outer space is formed through the results of analysis of achievements, existing conditions, circulation, climate, vegetation, and views on the site.

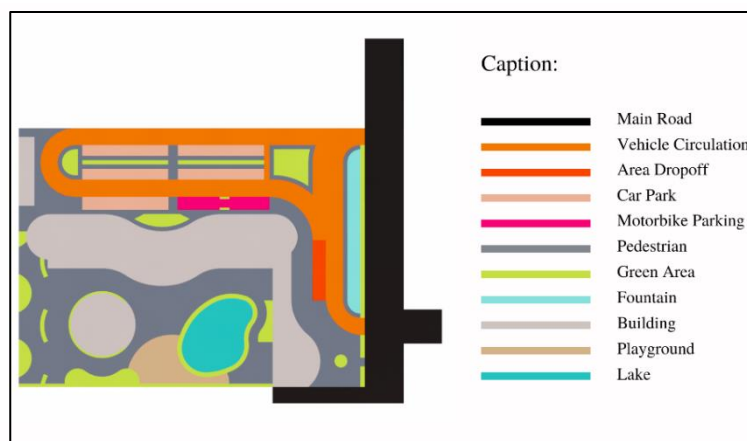


Figure 2. Outdoor Space

3.3 Concept of Inner Space Permit

The concept of inner space relates to the user of space planned through space dimensions in the form of proportions, length, width, and height. Then the size of the furniture, the use of pleasant colors and shapes, and the movement of circulation are supported by the material and texture. From the picture Figure 3, we know that the proportions of the space that are friendly to the size of the child's body create a cozy atmosphere.



Figure 3. Toddler Playroom

From the picture Figure 4, the use of furniture corresponds to the anthropometry of the child, so that they can easily use the facilities already available, and can do things independently. The choice of colors in the interior of the room is adjusted to the function and needs of the child's psychology so that they feel comfortable and happy to be in the space. Bright colors are needed to increase children's enthusiasm for activities and be creative in developing their interests and talents. Meanwhile, neutral colors are placed in a room that requires focus and calmness. As we can look at the picture (Figure 5).



Figure 4. Women's Toilet

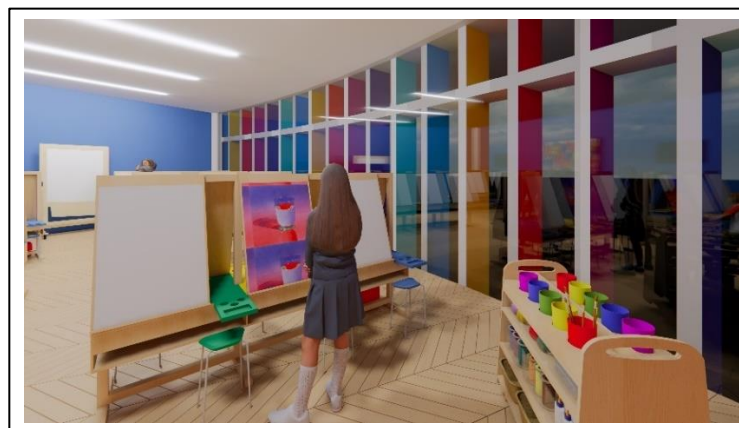


Figure 5. Toddler Playroom

Form play is needed to attract the attention of the child and follow the child's dynamic attitude. The picture Figure 6 is the design where the material used for the child-friendly room concerns the security and safety of children playing. Such as not applying sharp-sided materials and others.



Figure 6. Painting Space

3.4 Concept of Facade

The concept of face is formed by the formation of interfaces, simplicity with natural materials, and also the use of colors that are pleasant to the child. The game of roof shapes is also a face-to-face concept. In the mass facade, the use of sun shading, vertical gardens, and non-massif walls is applied to unite the theme of Green Architecture on the masses. As we can see in the design from the picture Figure 7, all of the environment.

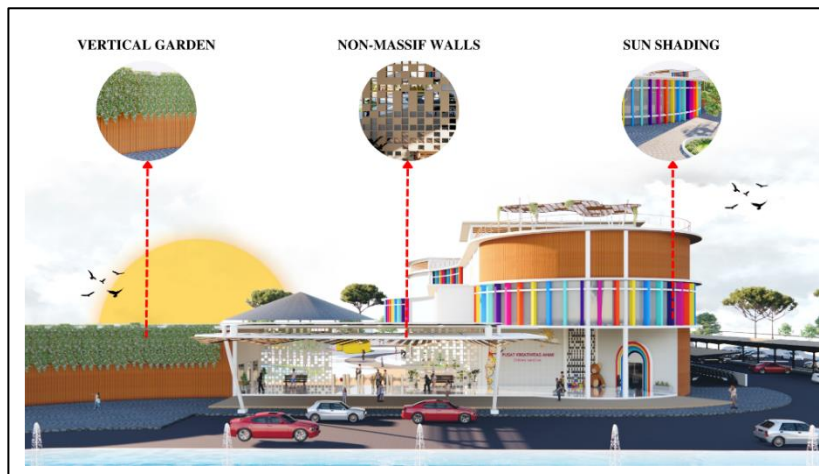


Figure 7. Facade Building

4 Conclusion

The Children's Creative Center in Medan, located in Medan Johor District, precisely on Jl. Karya Wisata, Cadika Park Area is designed to accommodate children's creative activities through educational and creative activities. The building, which is located in the Cadika Park area, is expected to help the desire of the Medan city government to realize the addition of children's facilities in city parks. This place is also expected to be a building that can be an educational tourism facility for the people of Medan City and tourists visiting the city of Medan. The design of an attractive and attractive façade with a combination of attractive and attractive colors and shapes in the spaces chosen according to their character and age attracts children to play and learn. Green Architecture was chosen as the theme of this building. The selection of this theme is based on the adjustment of the building to the surrounding location which is a Green Open Space, so that later in the application of the building the values of land function are not disturbed. In addition, the taking of this theme

is also expected to have a positive impact on humans, buildings, and the surrounding environment by the principles of Green Architecture itself.

5 Acknowledgment

This project, which is a study of the Design Of Children's Creativity Center In Medan City With Green Architecture Concept, the purpose of this design is to build a plan for a children's creativity space in the city of Medan that can have an impact on the growth of young people. The Department of Architecture, Faculty of Engineering, Universitas Sumatera Utara, and all those who helped with the study and design are acknowledged by the author.

6 Conflict of Interest

The authors whose names are listed below certify that the manuscript does not have a conflict of interest.

Nadiyah Marhani Siregar

This statement is signed by all the authors to indicate agreement that the above information is true and correct (a photocopy of this form may be used if there are more than 10 authors):

Author's name (typed)

Author's signature

Nadiyah Marhani Siregar



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