

ANALYSIS OF THE APPLICATION OF BETAWI ARCHITECTURE IN CAFE DESIGN IN JAKARTA FROM THE ASPECT OF AFFORDABILITY IN CONSTRUCTION

Religiana Hendarti, Vivien Soebiyani, Yanita Milla Ardiani
Bina Nusantara University, Indonesia
 rhendarti@binus.edu

ABSTRACT

This paper presents a study of the things that determine the implementation of Betawi architecture in a 'café' design for a community in Jakarta. The café for this community is a project to facilitate the activities of PKK women in Palmerah District, Jakarta. The majority of these communities are local residents who are also mostly Betawi ethnic, therefore, this design requires an affordable design, in the sense of a design that can represent local culture with the application of Betawi architecture that can meet limited funding. As is known, Betawi architecture is architecture that is rich in detail ornamentation and made of wood. The result of this design is a 'café' design that uses the most important Betawi ornament with a frame structure and iron construction.

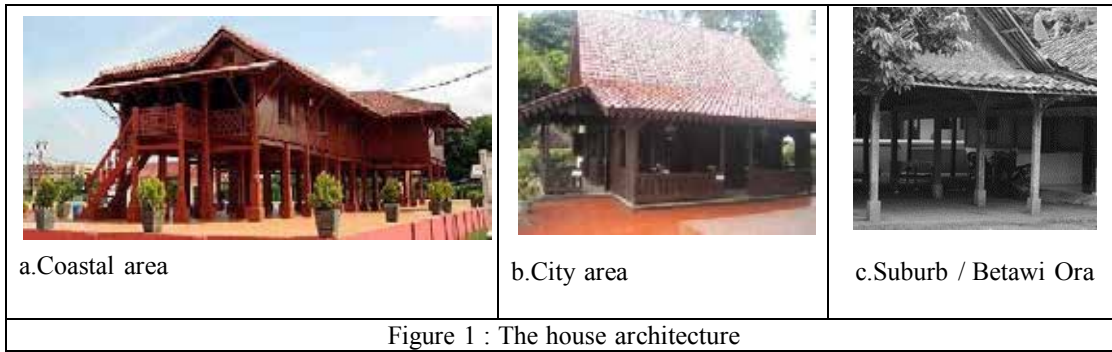
Keyword; Betawi Architecture; Café Betawi; Jakarta; Cost Efficiency

Introduction

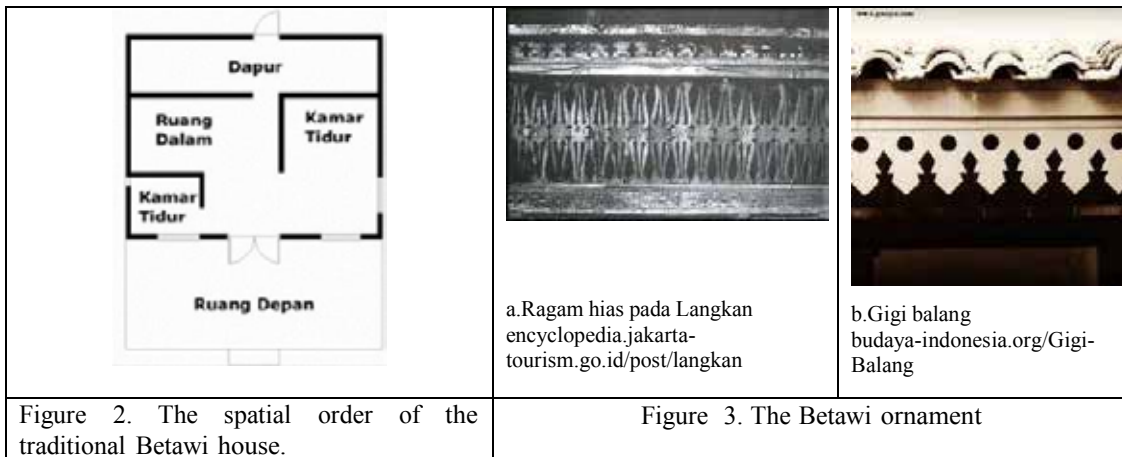
In this paper also describes the architectural design that applies Betawi architectural values in an effort to preserve traditional architecture and become a regional tourism attraction in Jakarta. In this Betawi café design, it is important to represent the presence of Betawi architecture that is effective, easy, and cost-efficient. Effective or well targeted intended design raised even though simple but able to represent the embodiment of Betawi architecture. It is meant to be built without high expertise, easily duplicated, easily engineered to adjust the place and location. Cost efficiency means that café designs can be built with limited costs, and are cheap compared to other designs.

Architecture of Betawi

Betawi architecture is an authentic traditional architecture of Jakarta, which grew and developed in Betawi society. The Betawi people themselves are people of mixed descent from various races and ethnicities who for generations lived in the Jayakarta area which later became Batavia / Betawi. Betawi culture can be said to be a relatively new / young culture born from the assimilation of Sundanese, Chinese, Arabic and Malay cultures. In 1930, this was the first time that this community was registered as a Betawi ethnic group with 778,955 people who constituted the majority of the population inhabiting Batavia and its surroundings. Noted, this Betawi region in addition to covering coastal areas, buitenjorg (Bogor) to Tangerang. In the coastal areas, the Coastal Betawi people "met" with the Chinese and the Bugis. This meeting has produced rural Chinese-style vernacular architecture in the Teluk Naga region, Tangerang and Bugis fishermen in the Kamal Muara area, North Jakarta. While in the south, the Betawi Udik "met" with the Sundanese who produced vernacular architecture on stilts in the Kranggan region, Bekasi. (Agung Wahyudi, 2008). Based on its location, the architecture of the Betawi house can be distinguished as the architecture of the coastal Betawi house, the Betawi Kota house, and the architecture of the Betawi Ora / Udik house. These three types of houses have an effect on the construction of buildings, namely for the Betawi Coastal houses are houses with high stilts house construction adjusting to the natural conditions of coastal areas, Betawi City houses with house construction on land, and traditional Betawi Ora houses with much more architectural houses simple with a difference in wooden floors slightly above the ground. Thus for the city of Jakarta, known as the original Betawi house architecture. In general, there are three types of Betawi house architecture that can be identified from the shape and structure of the roof, namely the warehouse house, the Joglo house, and The Bapang or kebayah apparently is also related to the form and division of the plan. Based on the spatial arrangement the Betawi traditional house is divided into four main parts namely terrace, inner room, bedroom and kitchen (P, 2009)



Betawi town house is a typology of Betawi architecture that developed in the Jakarta city area which was appointed as the architectural identity of the city of Jakarta. The ledge is a barrier in the front room (terrace) made of wood as high as approximately 70 cm. This ledge has various forms. Dental Balang Lisplank is a decoration found in the listplank. Balang teeth are made of wood. The dental teeth come in a variety of forms, from simple to complex shapes, and the use of these shapes depends on the desires and economic conditions of the individual. (Ahmad Nur Sheha G, 2011) Thus the more complex the shape of the gear teeth used, the greater the income of the homeowner.



Method

The application of Betawi architecture on a café design concept is by comparing several designs of the house architecture to find out simple form that can fulfil the budget. This method is also conducted in determining the ornament. The analysis are include : (1) Form analysis, (2) Structure and construction and (3) Ornament, and (4) the comparison of the cost prediction




Result and Discussion

1. Form Analysis

Based on its shape, Betawi house architecture as well as other traditional architecture consists of a dominant roof, body and legs. Based on 3 types of Betawi houses, the type of warehouse house is the type of Betawi house with the simplest form - such as a saddle-shaped roof shed. While the type of Joglo house, with a high pyramid-shaped roof has a strong resemblance to Central Javanese architecture, because it is very dominantly influenced by Javanese architecture. The Bapang house / Kabaya house is the most architectural type of house that features the most authentic Betawi house, with an improved form of a warehouse house but unlike the roof of a Javanese Joglo house. This Bapang house has a gable roof with orientation on the elongated side as the width of the house, so the house looks bigger.

In the Betawi house, there is a division of space consisting of a terrace, an inner room, a bedroom / ward. There is always a kitchen function but separate from the main house. Especially in Bapang / Kabaya and Joglo houses, the existence of terrace space is the most dominating area of the house. This terrace serves as a space for receiving guests, resting and others. This terrace is a characteristic that can not be separated from the Betawi house architecture. This terrace space is an open space in front of the house which is generally shaded by a sloping roof supported by poles. Although the roof is an extension of the main roof which houses the interior and the interior, the shape is a characteristic and identity of the Betawi house architecture. Thus the shape of this terrace becomes a form that is easily recognized and as a traditional Betawi architecture so that it can represent the presence of Betawi architecture. In addition, its public functions are suitable to be developed for wider functions such as seating for cafes and so on.

Table 1. Form formulation

Initial Form		
		
Form Modification		
<p>From the three pictures above, it can be seen, the part of a traditional house that uses minimal materials is the terrace.</p>		




2. Structure And Construction Analysis

Betawi traditional houses use wooden construction as the main structure. Generally use a strong and durable type of wood found in the location where the house is located. Un wood that is often used is jackfruit wood which was easily found around Batavia at that time.

Unlike the roof truss structure of the Joglo house in Java, the roof truss structure of the Joglo Betawi house uses horses with diagonal trunks as found in the Western horses system introduced by the Dutch. The structure of the saddle roof frame of the Betawi Bapang / Kabaya house uses the structure of the saddle roof truss with the two outer sides of the Bapang house roof actually formed by the canal (sorondoy) of the saddle roof which was located in the middle. If you pay attention, the construction of the terrace roof is relatively simpler and flexible in the sense that it can be adjusted to the required length of space according to needs. The roof terrace on the two types of houses, consisting of trunks of rafters which are supported on gording on wooden poles. Above the rafters are wooden or bamboo battens where the roof cover is placed. The structural system is very suitable for use in cafes which are semi-permanent and simple buildings.

For the construction of a café with the most cost-efficient costs, the selection of materials is very important. Construction must be strong, durable and inexpensive. To adapt to outdoor conditions, wood construction that is relatively non-waterproof can be replaced with a lighter, more durable steel construction. The main structure of wooden poles is replaced with iron poles and flat roof structures can be replaced with iron or mild steel frames with asbestos or metal roofing so that it does not require a large slope so that the material requirements can be reduced.

Table 2. Selection of structure and construction




The structure and construction of the Betawi house		
		
The structure and construction adjustment		
<p>From the above analysis, the skeletal structure is dominant, and the skeletal structure can be chosen which is not only affordable but also more durable than construction from wood materials.</p>		

3. Analysis of Architectural Elements and Ornaments

Like a house, then the traditional Betawi architecture knows some typical Betawi architectural elements such as Windows, Doors, Stairs, Poles, Balusters and Listplank. On the porch of the Betawi house, it has a distinctive architectural element namely the ledge and listplank which are the identity of the Betawi house. This element is a unique character that represents the presence of Betawi architecture. In Betawi café with commercial functions by expecting a lot of buyers, the room is meant to be able to receive as many guests as possible without obstructions. The existence of a fence or ledge, will have the effect of limiting guests to enter the room, therefore the use of balusters or balusters is minimized or even eliminated.

The use of balang teeth as Jakarta's identity has also been proven by the use of ornaments and decoration in several places on the toll road to represent the Betawi identity in the city of Jakarta.

Table 3. Selection of ornaments

The use of ornament on Betawi house		
		
The selected ornaments		
<p>From the three examples of the use of ornament above, food can be seen, the ornament that is often used is the gigi balang. This ornament is widely used on the roof in the patio area.</p>		

The conclusion from the analysis above, it can be seen the synthesis of Betawi architectural adjustments in the café design in Figure 1. In this picture, we can see the shape of the roof that uses the shape of the roof for the porch part of the Betawi traditional house. The structure used is a frame with CNP channel steel construction. Betawi architectural ornaments used are "Gigi balang".

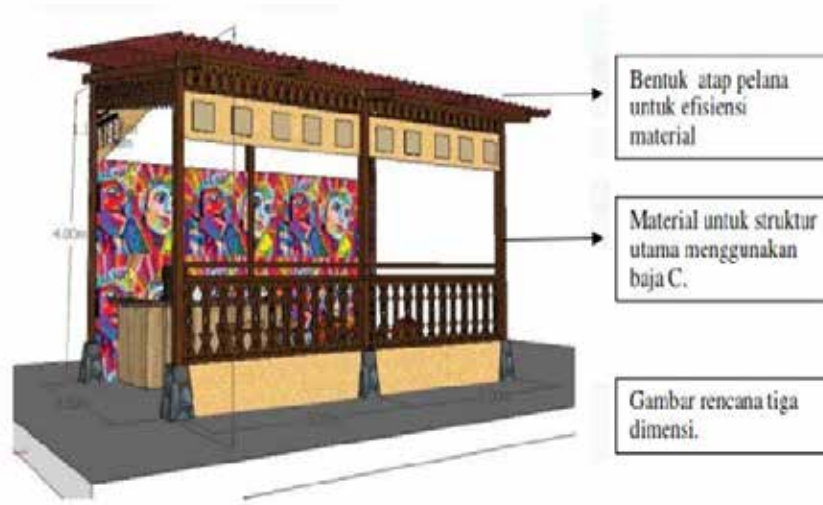




Figure 4. Synthesis Adjustment of Architectural Elements for a Café

4. Cost Efficiency

To achieve the goal of cost efficiency, a comparison is made between examples of the application of Betawi type 1 architecture and the application of Betawi architecture. Betawi architecture as a complete traditional house on a smaller scale and a simple Betawi Café with a representation of Betawi architectural identity.

Type	Type A	The final form
		
Representation	Betawi house	Café Betawi
Function	Betawi cullinary	Betawi cullinary
Dimention	9 x 6 m2	4 x 6 m2
Form	Joglo type	The roof over the terrace of the Betawi house
Structure and construction	Wooden house	The roof made of metal sheet and the structure uses the Canal steel
The ornament	Gigi balang	Gigi balang
Cost prediction	IDR 3.000.000 / m2	IDR 1.000.000 / m2

Conclusion

Analysis and discussion above, can be taken several important points in determining the application of Betawi Architecture in a café with limited funds. These points are as follows:

1. Overall, the material for this café structure is iron, due to the fast workmanship so that the cost for the craftsman can be more effective.
2. The shape of the building still uses a rectangular shape, but with a sloping roof shape in one direction. This is to reduce the material for the roof structure.
3. The element chosen is 'dental teeth', because this element when viewed from its application is the most widely used element and has a meaning in life must always be honest, diligent, resilient, and patient. So this element is one of the main elements in Betawi architecture and is in line with the spirit of building a café for a community.

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