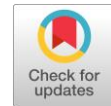


Lexical and synthesis of architectural vernacularism of lanting house in Banjarmasin



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ARTICLE INFO

Article history

Received February 16, 2022

Revised March 14, 2022

Accepted April 11, 2022

Available online August 31, 2022

Keywords

Lanting house

Floating house

Vernacularism

Banjarmasin

ABSTRACT

The cultural heritage of river life in Banjarmasin in the form of lanting houses is an important asset that can support the potential for the development of the city. One of the efforts to maintain and develop the existence of the lanting house can be done by tracing the lexicon and aspects of its vernacularism. From the historical and cultural studies of the origin of the lanting house, it was found that the culture of migrating (Lahei-Muara Teweh-Central Kalimantan) and trading culture (Hulu Sungai - South Kalimantan). To lead to a new development with new functions, the lexical "Rumah Lanting" and "Balanting" must be maintained. The word "lanting" and the process of "balanting" must be included such as gallery lanting, lanting guest house, or lanting homestay. Lexical "balanting" emphasis on lanting architecture which can only be docked and not settled. With the lexical "balanting" process, the architecture of the lanting house is floating and moves along the river. From analysis of 14 lanting houses located in the urban city, such as Kampung Seberang Masjid and on Bromo Island Kampung Mantuil, Banjarmasin City, it is found that the character of the lanting house which has spontaneous adaptive ability, multipurpose space expression, and flexibility of movement. The lanting house is able to move flexibly as well as the lexicon that is attached to it in the public perception towards artifact/notation of lanting. The influencing factor was the ethnolinguistic culture which influenced the journey of the Proto Banjar community-Dipa Daha people to the Banjar people during the Banjar Kingdom era. The result of the vernacularism synthesis confirms that the lanting house fulfills the rules as part of the vernacular architecture.

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1. Introduction

The developments in all fields give opportunities to survive or develop but it also can be vice versa. It can be susceptible to be eroded and disappearing along with the development itself. The cultural heritage of river life in Banjarmasin such as lanting house is an important asset that can support the potential of city developments and the preservation of river life culture. One of the efforts to maintain and develop the existence of the lanting house can be done by tracing the lexicon and exploring the aspects of its vernacularism. Development is unavoidable but predictable and controllable. This study seeks to contribute to the position of lanting house in surviving and developing with specific recommendations.

Riverside settlements in Banjarmasin City are the settlements with distinctive cultural characteristics of river life. These settlements consist of several physical aspects as the main elements of the settlements. These physical aspects include lanting house (floating house), house on the riverbank with stilt construction, local pedestrian as bridge that connects groups of houses to and from

the river and local dock which also functions as batang for toilet, showering and laundry activities, and to wait for boat seller and river transportations [1] as show in Fig. 1.



Fig. 1. The current lanting houses today are located in Kuin and Mantuil, Banjarmasin City

Raft and floating houses are common terminologies that have developed in the settlement studies around the world [2], [3]. This term divides the perception that the raft house is the embodiment of traditional context and the floating house in the context of newer building [4]. In the perspective of resilience, floating house can be a solution in disaster mitigation which consists of three conditions, such as floating house, amphibious house, and floatable house which are the solutions in design [5]. In the context of raft house, research associations tend to explain the traditional context from rescue, revitalization aspects and to its existence today [6].

In terms of history, lanting house is the house of the upper middle class [7]. As noted by [8], who found the exploration record of a British captain, Daniel Beckman, titled *A Voyage to and from the Islam of Borneo in The East Island Indies*, London (1718). This book tells about the description of the river in Banjarmasin while sailing to Banjarmasin on June 29, 1714. Before returning to England on October 29, 1715, Beeckman reported that there were at least 300 lanting houses alongside the Martapura River and the Chinese River (Pacinan). Beeckman described the residents of lanting houses along Martapura and Pacinan rivers as prosperous people, compared to those who live on the mud (mainland) as people's dwellings as show in Fig. 2. "When the river tides, lanting house connected by a boat (jukung), but when the river water recedes, the wood logs become the connecting access between lanting," Beeckman wrote . [8] also concluded that the lanting house was the house of merchants, especially those from Banjar Batang Banyu, and people from Negara Daha.



Fig. 2. Kampung Pecinan etnis Tionghoa di riverbank of Martapura river in 1870 and 1899Source: Koleksi Tropen Museum and kitlv.pictura-dp.nl

The developments of lanting as floating house on river are inversely to the developments of house on land. The quantity is decreasing, the quality is concerning. The lanting house must survive between scourings times, it is important to preserve and new development with lanting and *balanting* characters are inherent to its soul and physique.

2. Method

This research is a study that seeks to explore the originality of the lanting house from its shape, lexical side, and to analyze its vernacular variables. Based on the characteristics of this research, the research paradigm is determined using the realism paradigm, which is a paradigm that can accommodate historical exploration without being biased by the existence of mythological values which principle cannot be scientifically justified. This research methodology refers to the case study

methodology which is based on an intrinsic case study. Case studies of the complexity of function units have a contemporary nature and can be investigated naturally with using various techniques and data sources [9].

The research location is in Banjarmasin City, which is located in Kampung Seberang Masjid - Old Market Area with 10 lanting houses, and in Mantuil - Bromo Island as many as 4 lanting houses. The describes the position and physical data of the lanting house as show in Fig. 3.

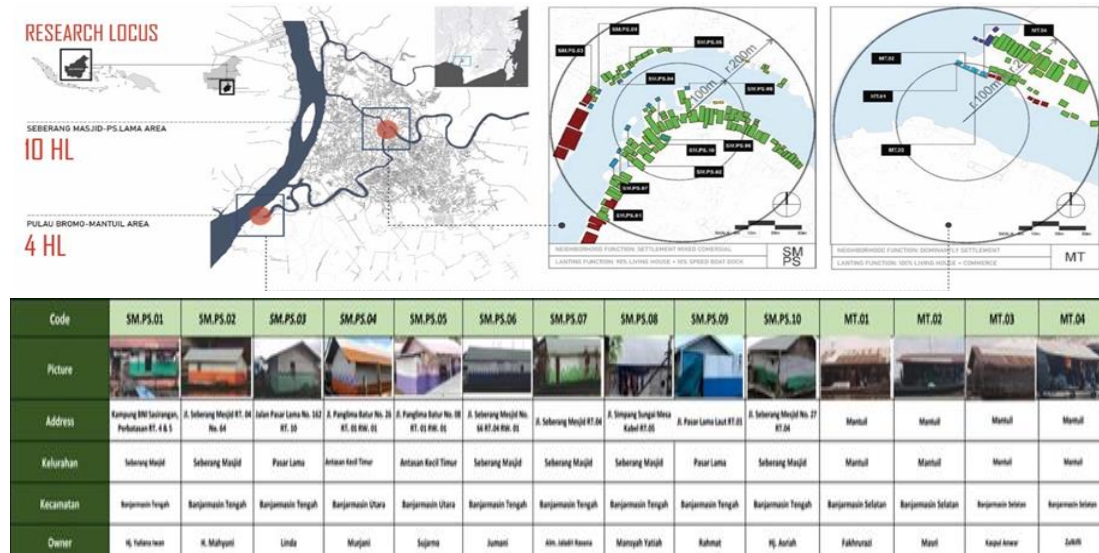


Fig. 3. Research location and physical data lanting house unit

3. Results and Discussion

3.1. “Lanting” and “Balanting” Lexicon

Based on ethnolinguistics, there is a relationship between the culture of certain ethnic speakers and the language they use. The contextual meaning of “lanting” and “balanting” arises due to the relationship between language and the context of its environment. “Lanting” and “Balanting” are the meanings contained in the lexicons of the language of the people who live on the banks of the Barito River, Sungai Negara and Sungai Martapura. “Lanting” and “Balanting” have the same meaning among the people who live in the three rivers. This indicates that their cultural characteristics are not much different, because they live in the same environment, namely riverside settlements and are connected to each other by river flows (upstream-downstream).

Lanting includes lexical of material and “balanting” including lexical of non-material. Lanting in the lexical of the people who live on the banks of the Barito River, Sungai Negara and Sungai Martapura has the same meaning, namely lanting made of bamboo/wood which is tied tightly with ropes. Lanting floats on the river, tied up with ropes or rammed with ironwood sticks. Meanwhile, “balanting” means floating and moving along the river, down from upstream to downstream.

In order to maintain the existence of the Lanting House, the lexicals of “Rumah Lanting” and “Balanting” must be maintained. In order to be developed into a new function, the words “lanting” and the process of “balanting” must be included, for example: Lanting Kotta Mara, Masjid Lanting, homestay lanting, even the word traditional toilet must also be accompanied by a lexical lanting, which becomes Lanting Jamban. We can find the term Lanting Jamban in settlements along the Sambas River, West Kalimantan. This is due to the “balanting” process, the lanting architecture must float and move along the river.

3.2. Lanting Architecture Conception

In the discourse of lanting architecture, analysis of 14 objects of observation finds themes related to the concept of lanting architecture in Banjarmasin City. There are four themes that build the conception of the lanting house, such as:

- *Adaptive-spontaneous theme*, a theme which determines the form of lanting house, influenced by building knowledge factors with efficiency basis.
- *The theme of multipurpose space*, which is the theme underlying the zoning to the perceptual space in the lanting house. Factors that influence the formation of space are based on the financial needs and capabilities of the lanting owner, as well as the perceptual agreement by the residents in determining private, semi-private, service, and public zones. The activities of the residents of the lanting determine the space requirements to accommodate them.
- *Moving themes*, themes that underlie the structure of lanting which is influenced by other themes such as lexicons and adaptive themes of building forms. The factors forming this theme are closely tied to constructive knowledge and oral culture to the financial capacity of lanting in agreeing on functions to the division of space in it.
- *Lexicon theme*, a theme inherent in people's perceptions/meantifact of the artefact/notation of lanting. Factors that influence this theme are ethnolinguistic culture which influences the journey of the Proto Banjar people - Dipa Daha people - to the Banjar people during the Banjar Kingdom era.

3.3. Vernacularism synthesis

Understanding the synthesis of the lanting house through vernacular variables is an attempt to justify whether the architectural type is traditional or vernacular. During the historical review of the supporting literature as well as the hierarchical tracing of spatial and traditional elements, it can be explained that no significant traditional side has been found so that the study of vernacular domains, elements and variables becomes the researcher's hypothesis and is proven by studying the vernacular elements. Vernacular architecture is architecture that maximizes local potential and its adaptation to the environment [10]–[12]. The study of vernacular architecture is relatively new, academically only getting a place and recognition since 2007 through the book by [13], [14] state that the concept of vernacular architecture always includes 3 elements, namely the realm, elements, and aspects of vernacularity.

There are still few experts who try to synthesize the variables that make up the Vernacular Architecture. Variables that are often used by other researchers to identify vernacular architecture are Rapoport (1969) in [15], [13] and Turner (2002). The three of them express an emphasis on the aspect of locality. Turner issued 4 variables, Rapoport issued 6 variables, the results of these two experts were in the variables formulated by Oliver, therefore the approach in this discussion is the variables of vernacular architecture by Oliver [16], such as:

3.3.1. Traditional Self-Built And Community-Built Buildings

Based on the history of the formation of the lanting house, especially those associated with the Lahei Dayak Tribe. The Lanting house can certainly be built using traditional methods and is part of the communal architecture (community). The Lanting house was built using traditional techniques, methods, knowledge and materials that they had at that time. The construction process uses traditional equipment and adaptations to available materials. The Lanting house was built during the journey from upstream to downstream, built communally/together/mutual cooperation by the children of the Lahei Tribe who at that time accompanied the son of the Lahei Tribe chief to migrate to downstream area, so it can be concluded that the Lanting House has fulfilled one of the architectural principles vernacular.

This culture is most likely what caused the Lanting House to spread throughout the Kalimantan region through large rivers, such as: the Kapuas River and the Malawi River which flow through the West Kalimantan area; Kahayan River, Mentaya River and Kapuas River which flow in the Central Kalimantan region; Mahakam River, Kayan River and Berau River which divides East Kalimantan, and the Barito River which flows between South Kalimantan and Central Kalimantan

3.3.2. Earlier Building Types

Based on historical tracing, Rumah Lanting is included in the Proto-Banjar culture. The culture that is earlier than the Dipa Kingdom (before the 16th century, the forerunner of the Banjar Kingdom). The culture of building this lanting house is a culture belonging to the Dayak tribe, the original inhabitants of Kalimantan. In recorded history, the Dayak Kingdom before Dipa State was the Nan-

Serunai Kingdom which was attacked by the Majapahit Kingdom in the 14th century. No one has written when the Nan Serunai Kingdom was founded, but it is certain that the Dayak tribe had inhabited South Kalimantan when most of the area was still a giant bay stretching from the sea to the foot of the Meratus mountains. Based on this premise, the lanting house is part of the vernacular architecture because the lanting house was built or has existed since the Dayak tribe existed in Kalimantan, so the lanting house is the forerunner of the type of architecture that exists in the Kalimantan environment (Earlier building types).

3.3.3. Architecture Within Its Environmental And Cultural Contexts

Rumah Lanting can be ascertained as a vernacular architecture that meets contextual rules for the local environment and culture. This can be seen from the shape, space and construction of the lanting house and its relationship with the large rivers that flow and become the environment in which this lanting house grows and develops. The shape of the lanting house is simple and functional as needed. This simplicity is a form of adaptation of the lanting house so that it can withstand environmental pressures in the form of rivers with relatively swift currents. The use of logs and other floating materials as the fundamentals for the arrangement of the lanting house is also an adaptation to the river environment and the demands of the "balanting" culture, so that the lanting house has an obligation to float and move. Lanting house: form, space and ordering as show in Fig. 4.

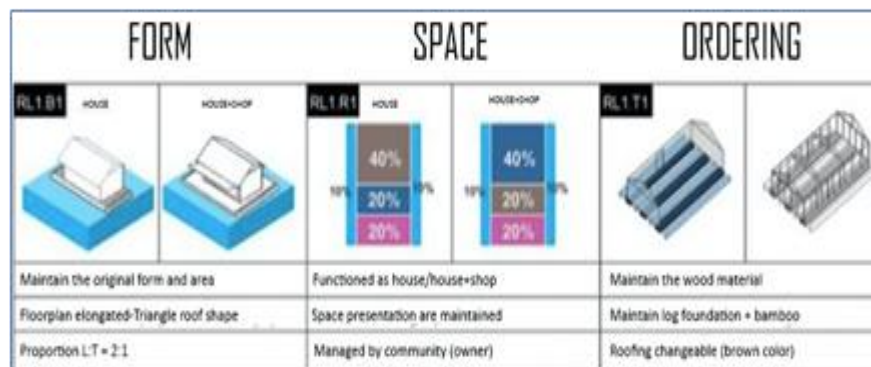


Fig. 4. Lanting house: form, space and ordering

The layout of the Lanting House is also very functional according to what they need during the trip, namely: (1). Terrace/court/palatar: building terrace with a width of 1 meter with wooden construction. The position of the background is around the building or on one side of the building. (2) Kitchen/padu/padapuran: a room in which the occupants agree on as a service area which is usually located in the inner and outer corner of the house (terrace), and (3) Bed/paguringan: a room marked with the existence of a bed, either without a partition or even with a partition.

3.3.4. Environmental Conditions, Material Resources, Structural Systems And Technologies Have Bearing On Architectural Form

Rumah Lanting is located in an environment within of a flowing river, in an environment in which provides an abundance of local wood materials. Natural conditions with natural resources and material so as to form local knowledge of the community in producing the architectural form required for this condition.

The Dayak Lahei tribe in the Central Kalimantan region has a "balanting" culture from upstream to downstream until it reaches Banjarmasin City. The architectural forms they produce are those that are able to protect them from heat and rain during their travels, and which has the ability to move from upstream to downstream. They are provided with supplies of local timbers from production forests in the middle of Kalimantan Island. They then use this wood to build a "lanting", so they can begin their journey with this basic arrangement. Along the journey of the travels they began to build a "house" on top of the "Lanting" so that the "Lanting House" was formed. From this story it can be concluded that they are not craftsmen/experts, but they are ordinary people (commonly people) with simple technology with local knowledge gained from experience, producing the forms they need to meet their temporary housing needs along the way from upstream to downstream. Lanting house history route from Dahe as show in Fig. 5.

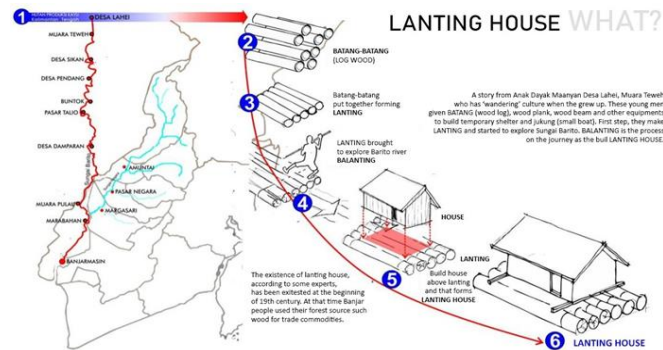


Fig. 5. Lanting house history route from Dahe

3.3.5. Many Aspects Of Social Structure, Belief Systems And Behavioral Patterns Strongly Influence Building Types, Their Functions And Meanings

The form, function and meaning of Rumah Lanting are closely related to social aspects, beliefs, and behavior settings. Social aspects, beliefs and behavior demanded the youth of the Lahei tribe to migrate together. Along the way they look for a place to tie up with other jukung-jukung (boats) to stop by to rest, buy and sell or just stay in touch, therefore the Lanting House has a terrace around where boats (jukung) or other lanting houses are attached. Along the way from upstream to downstream, the lanting house will stop urban areas such as markets and docks, in purpose to add supplies and continue the journey. Others began to dock and settle down because of social demands such as work and marriage with local residents. This can be found in the Muara Teweh area, State Market and Kuin Market in Banjarmasin. There are 4 (four) ways to dock on a river bank, such as: dock to a riverbank house (RBS), dock to a nearby tree, tethering to a pole/stump that is not part of the house structure, and dock to a footbridge. For that, they need a terrace and a mooring on the lanting house as show in Fig. 6.

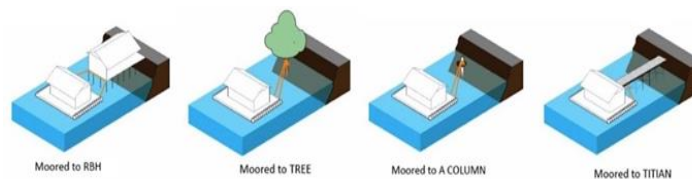


Fig. 6. Lanting moored method

3.3.6. Dwellings And Other Building

In essence, the Lanting House can be separated from its context with the settlement on the edge or the settlement on the river bank. In the development phase of Lanting Houses which are already docked and settled, the settlement pattern of the lanting shifts and is closely tied to the setting of the riverbank settlement. The neighborhood patterns and accessibility used as determining factors for the closeness of lanting houses to one another. The results of this study found 4 access patterns in lanting settlement settings, namely: direct access patterns, branch access patterns, single-indirect access patterns, and indirect-linear access patterns as show in Fig. 7.

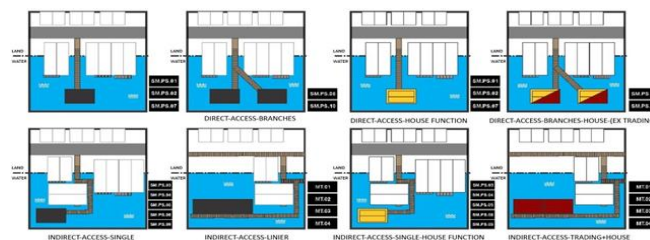


Fig. 7. Lanting settlement setting typology

3.3.7. Related To Their Environment Contexts And Available Resources

Studied from the aspect of architectural development, the lanting house develops by adjusting to the environmental conditions and resources that exist in these various phases. During phase I

(Establishment), Lanting Houses went on a long journey, so that the foundation material that is able to meet this need is a type of log, which is strong; current-resistant and durable. During phase II (Settling), the foundation material for Lanting Houses generally still uses log wood, but some have begun to be replaced using bamboo material, because logs are not widely available in the downstream area, and logs that have been used for a long time lose their substance, so they began to sink. For lanting owners who have financial capacity, bamboo material is an option to replace logs, but for those with limited financial capacity, plastic waste is the choice. During phase III (urban) there are many alternative material options for building a lanting house, including its floating construction. In the urban lanting house, the lanting house is not demanded by the culture of migrating in which requires it to go through a river of fast currents, so that new materials, such as drums and pontoon, are starting to be recommended for use in urban lanting houses. The development of new materials also affected the construction of the body and roof of the Lanting House.

3.3.8. Utilizing Traditional Technology

The construction of a lanting house from the beginning of the process until it is done built and started to function as a house was done through traditional techniques. This is a form of adaptation of the lanting house to meet the needs of its occupants. This can be seen easily in traditional toilet (jamban) that fulfill the showering, laundries, and toilet function. The shape of the traditional toilet (jamban) in the lanting is as simple as the shape of the lanting. The process of building and operating are rather easy. Toilets are made with a floor which has holes in it, one hole for disposing (BAB) and another hole for getting river water using a bucket or chop. There is no water reservoir or closet available. Only a small space is enough for one person to do activities, operating it is also simple.

3.3.9. Architecture Vernacular Are Built To Meet Specific Needs, Accommodating The Values, Economies And Way Of Living Of The Culture

Lanting houses were built to meet special needs, contain local cultural values, and reflect the way of life and the cultural economic picture of the community. In terms of its history and development, the lanting house was originally built to meet the needs of the migrant culture (Dayak Lahei to Banjarmasin) and the trading culture with the lanting house as the shop, balanting as a way of moving (Hulu Sungai to Banjarmasin). During its development, the culture of migrating and trading was influenced by the social and economic conditions of the owner in order to be able to survive during the journey (merantau). In the next phase, the lanting house is not only a place to live, but also to meet the needs of its residents by trading. Over time, the trade function was attached to the lanting house, because the lanting house was docked to and settled in urban areas such as markets and ports.

4. Conclusion

The basic concept that must be maintained in developing the Lanting House is to maintain the lexicon "lanting" in building names and "balanting" in building construction. The vernacular of the Lanting house fulfills the principles of vernacular architecture, so that the lanting house is concluded as part of vernacular architecture, not traditional architecture. The vernacular architecture built by the community stores a variety of (local) knowledge which is very valuable. Vernacular architecture was formed without going through a literary tradition. All constructive knowledge is fully conveyed orally and passed down through generations, trial and error. Some important knowledge to know about the current generation and also for science is knowledge related to the problems faced when building a house on a river. What factors must be considered, and also what is the appropriate solution (design) to solve the problem on the river. Based on the research findings that explain from the non-physical context to the anatomy of the lanting house, lanting is a vernacular architectural building in the city of Banjarmasin which is unique in its terminology as an object and has flexibility in the form and layout of its buildings.

Declarations

Author contribution. All authors contributed equally to the main contributor to this paper. All authors read and approved the final paper.

Funding statement. None of the authors have received any funding or grants from any institution or funding body for the research.

Conflict of interest. The authors declare no conflict of interest.

Additional information. No additional information is available for this paper.

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