



Ornaments in Architectural Design: Build Sustainability and Local Aesthetics in Pidie

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Abstract. Ornament has been one of the elements in Islamic architectural designs from the past until now. Ornaments are interpreters and extensions that link buildings with history and culture. This research discusses the role of ornament in architectural design as a means to build sustainability and local aesthetics in the Pidie area. This study aims to explore the concept of ornaments that reflect local cultural identity and promote the principles of sustainability in architectural design. The method used in this research is descriptive qualitative. Data was collected through a literature review, as well as tracing architectural design case studies with the use of sustainable local ornaments in Pidie. Analysis was carried out to identify forms, motifs, and ornamental materials used in local architectural designs and their sustainability. The population in this study were all traditional worship buildings in Pidie Regency, and the research samples were 3 (three) traditional worship buildings which were rich in ornaments. The research findings show that the most common ornamental styles in traditional worship buildings are calligraphy, geometry, and floral designs. Future research is expected to find out how traditional ornament ideas can be coordinated with contemporary ornaments. Ornaments in architectural design in Pidie have high aesthetic value and reflect local cultural identity.

Keywords: Ornament, Architectural Design, Sustainability.

1 Introduction

Aceh Province is the gateway for the entry of Islam into Indonesia so it has an impact on its social and cultural system. Islam is a religion adhered to by almost all Acehnese people since it first appeared in the 7th century AD. Then in the 17th century AD, the Islamic kingdom in Aceh was recorded as one of the strong and most advanced kingdoms among the 5 (five) Islamic kingdoms in the world, namely the Mughal kingdom in India, the Safavid kingdom in Isfahan, the Moroccan Islamic Kingdom in Morocco, the Ottoman Turkish Empire in Turkey and the Islamic Empire in Aceh [1].

Aceh province has a culture that is embodied and developed in society through habits and customs. One form of this culture is an object made by humans, one of the forms of culture that we most often encounter is a place of worship. Places of worship are one of the results of the physical culture of the community in the form of buildings. Initially,

the building as a place of worship was made based on the community's need for religious life in meeting spiritual needs.

This can also affect the architecture of places of worship in Aceh Province, especially in Pidie Regency, which has a distinctive shape as well as the influence of technological developments to form new patterns, where architectural patterns from the outside merge with traditional Acehnese architectural forms as a form of cultural acculturation. This architectural pattern of fused cultural values creates a new pattern that enriches the shape of the building to the ornamentation as a decorative element for the mosque building. This is what Ambary (1998) said regarding the process of spreading Islamic religion and culture in the archipelago occurring within the framework of acculturation. In the acculturation process, the people of the archipelago form, utilize and compose Islamic (Arabic) culture according to their needs [2].

One of the artifacts that witnessed the spread of Islam in Aceh during its early development was the Worship Building. Islamic worship buildings in Aceh are divided into 3 (three) Mosques, Meunasah or Mushala, and Dayah, centers of civilization, cultural centers, and Centers for Islamic Education in Aceh. The mosque functions as a center for worship, education, and social activities. Meunasah or mushala functions as a place of worship, education, and social activities. Then Dayah or Zawiyah is a further education institution devoted as an educational center [3].

However, the existence of traditional buildings that function as places of worship and Islamic learning institutions such as mosques and Islamic boarding schools are increasingly being neglected and are starting to become extinct. Besides this, there is also not much literature that discusses the history of the development of traditional architectural ornamentation in Aceh Province, especially regarding ornamentation in Pidie Regency. Several traditional worship buildings that remain in Pidie Regency include the Tuha Pulo Keunari Mosque, Balee Dayah (Zawiyah) Teungku Chiek Muhammad Amin Tiro, and the Gampong Bubue Dayah Mosque.

This is considered important because ornaments function as identifiers or markers of the characteristics of a particular culture, historical period, or architectural style. Typical ornaments on traditional buildings in an area can be a sign of identification of local culture or architecture. Ornaments can also be used to distinguish or identify certain groups or communities. Then ornaments also provide visual beauty. Ornaments can be decorative elements that add richness and appeal to an object or space. Ornaments that are beautifully designed and proportionate can provide a pleasing aesthetic touch and beautify the look.

Historically, the relationship between architecture and ornament has been quite interesting. It was revealed in the form of mere expressions and also as a show of strength. Throughout its development, the concept of ornamentation has evolved from cave carvings to technical perfection and the installation of photos of new constructions [4]. To achieve artistic value, people's tastes, and desires, ornaments are applied to architectural products. Throughout the history of architecture, ornament has been applied as an element that embodies emotion through an aesthetic search within the scope of possibilities and techniques of the period, and has been defined with the features of ornament [4].

However, the existence of traditional buildings rich in ornaments is increasingly being neglected and is starting to become extinct in Pidie Regency. In addition, there is also not much literature discussing the history of the development of architectural ornaments for mosques in Aceh Province, especially regarding ornaments on worship buildings.

For this reason, it is important to conduct research related to ornamentation used as a decorative element in mosque architecture. The research results are expected to be able to remap the existence of ornamentation on traditional buildings which have historical value as cultural assets by identifying the characteristics and development of ornamentation on religious buildings. The results of this research hope to be able to support more in-depth knowledge and studies regarding ornaments in the architecture of Islamic worship buildings in Aceh Province, especially in Pidie Regency.

2 Literature Review

In 1908, Adolf Loos wrote the article "Ornament and Crime", which can be translated as "Ornament and Crime". Loos questions the aesthetic value of ornament in modern architecture and expresses his view that ornament is a form of extravagance, excess, and ridiculousness. Loos argues that ornament has less relevance in modern society, more functional and efficient. He criticized the excessive decoration and considered it a sign of cultural decline [5].

Then Adolf Loos (1908), argued that the excessive use of ornaments hindered architectural progress and disrupted the actual function of the building. He promoted a minimalistic and all-practical approach to architectural design, emphasizing the utility and simple beauty of overly complex ornamentation. Loos criticized popular architectural styles of his time, such as Art Nouveau, for their elaborate and excessive ornamentation. He argues that excessive ornamentation is not only useless but also wasteful and detrimental to society. He equated the use of similar ornamentation with a crime [5].

Disagreeing with Adolf Loos, John Ruskin (2007) who was an influential British art critic, writer, and social thinker in the 19th century who wrote extensively on various topics, including the role of ornament in art and architecture said ornament was "a symbol of " in architecture. In his work, Ruskin emphasizes the importance of ornament as a means of expressing deeper meanings and values. He believed that ornaments should not only serve as decoration but should convey a moral and spiritual message. Ruskin views ornament as a language that artists can use to communicate ideas and emotions [6].

Ruskin advocated the use of natural forms and motifs in ornamentation, as he believed they reflected the inherent beauty and harmony of nature. He considered ornaments originating from nature to be more meaningful and honest than abstract or artificial designs [4]. According to Ruskin, the ornament has the power to evoke emotions and connect individuals with a sense of beauty, truth, and morality. He argued that the quality of ornament reflected the moral and social health of the people. He believed that

excessive ornamentation, devoid of meaning or purpose, was a sign of decadence and moral decline [7].

Then according to Peter Collins, McGill University Professor argues that Ornament exists for pleasure, a person is attracted to its beauty, and in turn creates a desire for ornament, which is part of the natural longing for pleasure [8]. Ornaments can be appreciated in the same way as statues, works of art, or other visual forms. The ornament can be interpreted as a surface detail that adorns a plain or homogeneous surface, something that gives elegance or beauty, or something that beautifies the appearance of a person or object [8]. Thus, it can be said that the basic form of enjoyment of architecture is simply pleasure in the appearance of things and the task of the architect is to build something pleasing to the eye, and at the same time, that architecture must also be functional. So, Ornament is the final touch in architecture [8].

The relationship between ornament and architecture has been of concern throughout history. Ornaments are sometimes only shown in the form of mere expression and sometimes become the highest part of the building. In its development, the concept of ornament has evolved from cave carvings and now into technically perfect constructions [4].

3 Methodology

This research is qualitative research with a descriptive approach. This research was divided into several stages, namely conducting a literature study, observation, data collection (documentation), data analysis, and conclusion. The research location is in Pidie Regency. The limitation of this research is to choose the architectural object of traditional worship buildings in Pidie Regency where the building has a variety of ornaments on the building.

The object of the selected worship building is a building in which there are many ornaments. After observing the many buildings, several religious buildings were selected in Pidie Regency, namely the Tuha Pulo Keunari Mosque, Balee Dayah (Zawiyah) Teungku Chiek Muhammad Amin Tiro, and the Gampong Bubue Dayah Mosque.



Fig. 1. Research Location Map

4 Results And Discussion

The object of this research is a religious building built in the 18th to 19th centuries in Pidie Regency. Then the selected building is a building that has a rich variety of ornamental motifs. After observing, 3 (three) worship buildings consist of two different functions, namely the mosque and the dayah. The selection of the object of this research is based on differences in location and different years of construction. This is done to identify the characteristics of the ornamentation of each building to know the differences, similarities, and factors that influence its development.

The Tuha Pulo Keunari Mosque is a traditional building located in Gampong Pulo Keunari, Dayah Village, Tiro/Trusep District, Pidie Regency. This mosque measures 11.7 m² x 7.52 m². This mosque is estimated to have been built in the 19th century AD. There is no definite date for this yet, but in general, the architectural model of the mosque refers to the architectural traditions of 19th-century mosques.



Fig. 2. Tuha Pulo Keunari Mosque. As seen in the photo the new building was built next to the old building. Then you can see the carved ornaments on the interior of the building

Table 1. Ornaments on the Tuha Pulo Keunari Mosque

Position	Photo/ Sketch
	<p data-bbox="448 1046 994 1090">It is an ornament with geometric and floral patterns, placed on the exterior, precisely at the head of the building.</p>
	<p data-bbox="448 1240 994 1284">It is an ornament with geometric and floral patterns, placed on the interior, precisely at the head of the building.</p>
	<p data-bbox="424 1416 1020 1460">It is an ornament with floral patterns, placed on the interior, precisely at the head of the building.</p>

The second research object is Bale Dayah Teungku Chik Muhammad Amin Tiro is located in Gampong Dayah Blang, Mukim Tiro, Tiro/Truseb District. On the hanging

gaseu (rafters that form the roof cone) a calendar was found with Arabic calligraphy inscribed: “Hijrah Nabawiy Shalla-Llahu 'alaihi wa Sallam there 1296”. The year 1296 Hijri coincided with 1879 AD. The original bale building measures 7.3 m long and 2.94 m wide with a height of ± 5 m. The building has been added to the south with a 3.10 x 4.5 m porch-like section (seuramo).



Fig. 3. Bale Dayah Teungku Chik Muhammad Amin Tiro Mosque

Table 2. Ornaments on Bale Dayah Teungku Chik Muhammad Amin Tiro

Position	Photo/ Sketch
	<p data-bbox="456 1104 1059 1166">It is an ornament with a geometric pattern, placed on the exterior, precisely at the waist of the building.</p>
	<p data-bbox="456 1430 1059 1492">It is an ornament with a geometric pattern, placed on the exterior, precisely at the waist of the building.</p>



It is an ornament with a geometric pattern, placed on the exterior, precisely at the waist of the building

The third research object is Dayah Gampong Bubue Mosque, which is a mosque located in Gampong Dayah Bubue, Mukim Mesjid Baro, Peukan Baro District. This traditional mosque has dimensions of Length: 8.7 m; width: 8.7 m with the building material being wood. This mosque is estimated to have existed since the 19th century. This mosque building is one of the masterpieces of architecture and sculpture in Pidie. In particular, almost all components of the construction are given a very rich variety of ornamental motifs.



Fig. 4. Dayah Gampong Bubue Mosque

Table 3. Ornaments on Dayah Gampong Bubue Mosque

Position	Photo/ Sketch
	<p data-bbox="488 1437 1029 1490">It is an ornament with a geometric pattern, placed on the exterior, precisely at the waist of the building.</p>

Position	Photo/ Sketch
	 <p data-bbox="506 455 1053 513">It is an ornament with a geometric pattern, placed on the exterior, precisely at the waist of the building.</p>
	 <p data-bbox="530 654 1030 712">It is an ornament with floral patterns, placed on the interior, precisely at the head of the building.</p>
	 <p data-bbox="530 883 1030 927">It is an ornament with floral patterns, placed on the interior, precisely at the head of the building.</p>
	 <p data-bbox="506 1113 1053 1157">It is an ornament with a calligraphy pattern, located in the interior of the building, namely at the head of the building.</p>
	 <p data-bbox="471 1360 1059 1418">It is an ornament with floral patterns, placed on the interior, precisely at the head of the building.</p>

In some parts of the interior of the building, there are several ornaments in the form of calligraphy. Calligraphy plays an important role in Islam mainly because of its use

in writing the Quran. This role is considered one of the most important elements in Islamic art. Calligraphy is used to make inscriptions on the walls of Muslim buildings such as palaces, mosques, and households. These inscriptions often contain religious messages originating from the Koran or Islamic teachings. The ornament is often inscribed on the main part of the building if it is visible to many people.

Another form of ornament in Islamic architecture is the use of geometric patterns. In the building above, many uses geometric ornaments. The geometric design is widely used for religious structures depicting various Islamic symbols. Patterns vary in complexity from simple to very complex designs. This form of decoration relies heavily on the arts of repetition and symmetry to produce patterns. Patterns are created by skillfully integrating geometric shapes to produce unique patterns and symbols used in buildings. The geometric pattern facilitates connectivity between different parts of the building. Repetition is often used to produce patterns on walls. They also add aesthetic value to the structure.

Then the form of floral ornaments is used to represent nature. Patterns of floral ornaments are found on almost all sides of the building. Ornaments designed based on the geometric shapes of plants, show the dynamism that can be present in floral patterns [9]. In all of the above buildings, there are no ornaments of living things that can move, this is because Islam prohibits the production of works of art and architectural designs that depict living figures that move like animals or humans. In Islam, all living things with the ability to move may not be replicated in any form of art [10].

The intricate ornaments carved by the craftsmen show evidence of the ingenuity of the designers of the buildings at that time. The carved ornamental motifs have implied meanings that describe the living conditions of the people. In the case of raised traditional buildings, people's lives were affected by wartime. The influence of social life can be seen in the formation of buildings that are classified as typical, this can be seen in the similarity to the formation of a mosque with a square shape and using an overlapping roof. In addition, the similarity can be seen in the position of the ornament which is dominated by the head of the mosque, to be precise, on the building frame [11].

Ornament, in the context of art and design, has a close relationship with identity. Ornaments can be a sign or expression of a particular cultural, historical, or group identity. Ornaments often reflect the cultural identity of a people or ethnic group. Ornamental motifs used in art, craft, or architecture can be a characteristic that distinguishes one culture from another. Ornaments can also describe regional or local identity. Each region or region has unique characteristics which are reflected in the ornaments used in local art and designs. An example is an ornament in the traditional architecture of an area that reflects the characteristics of the culture, climate, or building materials available in that area.

Ornaments are also often used in the context of religion and spirituality. Ornamental motifs in religious art and architecture can be an expression of a community's beliefs and spiritual identity. Ornaments can play an important role in shaping and conveying identity, whether it is cultural, regional, historical, religious, or personal. They reflect the inherent values, traditions, and beliefs of a community or individual, and become an integral part of creative and aesthetic expression.

The position of the same ornaments certainly made it easier for building designers at that time to carve ornaments easily because of the typical building shape so the design techniques used had been determined. This certainly has a positive impact during the construction of traditional buildings in reducing construction time. As a result of the conditions of the war at that time, of course, it needed a fast construction time, considering that the mosque was a crucial building for the people of Aceh.

5 Conclusions

This research reveals the importance of studying ornamentation in traditional buildings, especially in religious buildings in Pidie Regency. Through the case studies conducted, it can be concluded that ornamentation on religious buildings has significant cultural, historical, and aesthetic values.

Ornaments on traditional buildings in Pidie Regency reflect the local identity and the cultural richness of the local community. These ornaments include a variety of unique patterns, motifs, and manufacturing techniques, which depict local wisdom related to buildings of worship. In the context of cultural preservation, this research highlights the challenges in maintaining and preserving ornamentation on traditional buildings in Pidie District. The damage and changes that have occurred to these ornaments require serious conservation efforts to ensure the continuity of this valuable cultural heritage.

The results of this study provide a deeper understanding of the role of ornamentation in the formation of local cultural identity, especially in religious buildings in Pidie Regency. In addition, this study provides a theoretical and methodological basis for further research on ornamentation in traditional buildings. Thus, this study contributes to the field of ornamentation studies and the preservation of traditional buildings and provides valuable insights for the government, society, and architectural practitioners in maintaining, understanding, and appreciating the existing cultural heritage in religious buildings in Pidie District.

Then this research confirms the importance of respecting and preserving ornamentation on traditional buildings as an integral part of local cultural identity. It is hoped that this research can become a basis for further action in the preservation and development of this valuable cultural heritage, as well as promote a broader understanding of the importance of traditional buildings in maintaining our cultural wealth.

The need for further research related to traditional ornaments in Pidie Regency, such as conducting further analysis on the effect of modernization on ornamentation in traditional buildings in Pidie Regency. This research examines the identification of changes in design, use of materials, and construction techniques that affect traditional ornaments. Then the role of ornaments in local identity looks further at the role of ornaments in traditional buildings as a symbol of the local identity of the people in Pidie.

References

1. M. H. Amiruruddin, *Menatap Masa Depan Dayah di Aceh*, Banda Aceh: Yayasan Pena, 2008.
2. H. M. Ambariyanto, *Menemukan Peradaban, Jejak Arkeologis dan Historis Islam*, Jakarta: Logos Wacana Ilmu, 1998.
3. M. Ibrahim, "Dayah, Masjid, dan Meunasah Sebagai Lembaga Pendidikan dan Lembaga Dakwah di Aceh," *Jurnal Al-Bayan*, vol. 20, p. 02, 2014.
4. H. Sağlam, "Re-thinking the Concept of "Ornament" in Architectural Design," 2nd World Conference on Design, Arts and Education DAE-2013, p. 126 – 133, 2013.
5. A. & O. A. Loos, "Ornament and crime: selected essays / Adolf Loos; selected and with an introduction by Adolf Opel; translated by Michael Mitchell," Ariadne Press Riverside, Calif, 1998.
6. J. Ruskin, *Lectures on architecture and painting*, Edinburgh: National Library, 2007.
7. J. Ruskin, "Modern painters," vol. V, National Library Association, 2013.
8. P. Collins, *Changing Ideals in Modern Architecture*, Mc Gill Queens University Press, 1998.
9. R. Hillenbrand, *Islamic art and architecture*, London: Thames and Hudson, 1999.
10. S. Akkash, *Cosmology and architecture in premodern Islam: an architectural reading of mystical ideas*, New York: State University of New York Press, 2005.
11. A. Payne, "Materiality, ornament, and media overlaps: Architecture between art," *Companion to the History of Architecture*, pp. 1-24, 2017.

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