

“Control and Analysis of The Architectural Elements Adopted in The Design of Historical Mosques in Jeddah: A Case Study of Al-Jilani Zawiya”

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ABSTRACT

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1. Introduction

1.1 Background of Research

According to historical literature, Jeddah was considered the gateway to the two Holy Mosques as it has a strong relationship with Mecca and Medina. For centuries, Jeddah has become a pivotal point for millions of pilgrims worldwide who wanted to perform Hajj and Umrah. In addition, the location of Jeddah is very strategic because it's the main Port of Mecca and had public infrastructure that support trade, logistics, public mobilization, Moreover, Jeddah, due to its proximity, has closely followed the urban development seen in the two holy cities, Mecca and Medina.

Therefore, to support sustainable transformation in Saudi Arabian cities, Jeddah continue to develop its urban and architectural buildings especially the historical district in which this location was globally known as a cultural gathering point which link the East and the West. This is because Jeddah was a vital commercial station that reflected the exchange of cultures and arts and first meeting point before entering two holy cities Mecca and Medina. Some notable development in the city has been currently witnessed by researchers such as restorations of heritage buildings, mosque, market, heritage architectural artefacts, and a range of intangible legacies from different periods of governmental authority. This gradual transformation is very important for improving quality of life for local residents as well as preserve indigenous buildings and culture and protect them from extinction and unintended demolition.

One of notable cultural heritage in the city of Jeddah is the existence of historical Mosques. According to Historians, in the past, a large number of pilgrims who came to Mecca and Medina for the purpose of Hajj and Umrah were certainly visiting Jeddah historic district. They transit in the area for taking rest before continuing their journey. They took rest in accommodation across the town and performed prayers in mosques situated in such area. Generally speaking, the number of Mosques in Historic district Jeddah was minimal and then the number continued to increase gradually over the years. The traveler Tamisier (2011) who visited the city of Jeddah in 1834 AD mentioned that the number of Jami' or Grand Mosques existed in the city in that period there was five mosques. where it became melting pot for Muslim worshipers who conducted daily prayers and religious activities. Also, Ayoub Pasha (1999) mentioned that the number of Jami' in Jeddah was five mosques with some regular mosques located around the city.

Based on this evidence, a wide range of scholars and researchers start to conduct research regarding the existence of historical mosques within the Historical district of Jeddah as well as identify Islamic architectural footprints including decorations and ornaments which incorporate in historic buildings. This effort is very important in order to preserve the area especially historical mosques from significant deterioration and disappearance. As a result, development in the area could be maintained according to Kingdom of Saudi Arabia enhance its cultural vision.

Furthermore, this research focus on exploring architectural elements including its analysis and control over the Historical Al-Jilani Zawiya in Historical district of Jeddah. Zawiya can be described as a small type of worship space, dedicated to the five daily prayers, serving as a place for learning. It may sometimes be annexed to an existing building, and it becomes a place for hosting travelers. The study also includes explaining the

importance of traditional architecture, ancient footprints, history of construction over the periods of time. Most importantly, the study will analyze restorations undertaken across the area which have been carried out from the beginning of its establishment until present day. Another focus is to learn about the architecture of the city of Jeddah, its urban formation, the divisions of neighborhoods, main roads, and the gates for entry and exit from it, by following historical maps and documented aerial photographs in which have a strong relationship to the development of Historical district of Jeddah.

1.2. Research Problem

The historical district of Jeddah has become a beacon of multicultural mosques with their unique architectural elements. However, attempts for conducting research regarding the preservation and restoration of localized mosques are still minimal especially with in emphasis in their control and analysis of architectural elements. In addition, studies discussing about historical perspectives regarding the existence of mosques in historical district especially Al-Jilani Zawiya remain insufficient. It is believed that there must a significant effort to undertake actions for further preservation in order to prevent the deterioration of historical values within the area. Therefore, informational and architectural research documentation upon the elements of historical mosques especially Al-Jilani Zawiya should be considered to contribute for sustainable preservation.

1.3. Objective of Research

The study aims to explore architectural elements of Al Jilani Zawiya to provide architectural documentations which could assist further preservation of Jeddah historical district. This is because there is evidence showing that there is discrepancy in between the type and model of mosques in historical district of Jeddah. As a result, some of the mosques experience deterioration due to lack of attention to the application of architectural and design standard which prevent mosques for sustainable preservation.

1.4. Significance of Research

The historical district of Jeddah is widely known as indigenous architectural building complex in Saudi Arabia which registered as one of the UNESCO World Heritage in 2014. Therefore, the emergence of initiatives to pay attention to and preserve the culture and history of Jeddah and its mosques by the state under the umbrella of Vision 2030, supervised by Prince Mohammed bin Salman's project for the reservation and redevelopment of Historical Jeddah including its mosques. The importance of this action is based on the belief that the Historical district was globally recognized as pivotal melting pot for various activities including trading, economic, cultural, and social since the early era of Islamic civilization until the present day. In addition, the existence of Islamic Port in proximity to area has given opportunity for urban growth and development.

1.5. Limitations of Research

This research limits its interval period of historical district of Jeddah transformation between the dawn of Islamic era until the era of Kingdom of Saudi Arabia. In addition, in terms of spatial limitation, this research only covers the area of historical district of Jeddah where it has been registered as UNESCO heritage site.

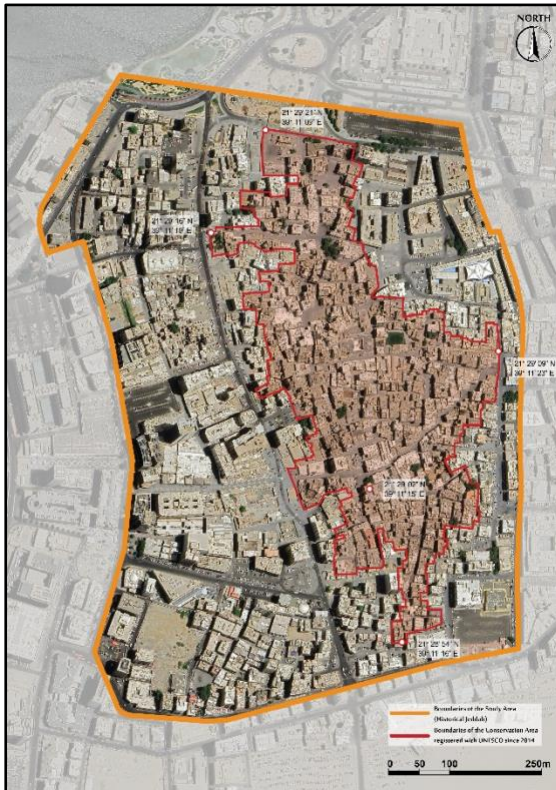


Figure 1. A recent satellite image showing the boundaries of the study. (Source: Google Earth, 2024).

2. Literature Review

2.1. History of Jeddah

2.1.1. Pre-Islamic Era

The historical roots of Jeddah trace back to the presence of Thamudic inscriptions and artifacts discovered in Wadi Buwaib, located northeast of the city. However, this site has faced gradual decline due to environmental factors (Justinia, Al-Sharif, Abu Zaid, 2020). These inscriptions, which date back to ancient times, offer insights into the lives of the Thamudic people. For instance, a prayer by an individual named "Sakit bin Yeshan" seeks divine perfection, kindness, and peace, while mentioning his relative "Jumaat" suffering from a fever (Farisi, 1980).

Jeddah's initial settlement is attributed to the Hawatin (an Arab fishing community) that utilized simple structures as shelters along the Red Sea coastline. Following their departure, the area saw the arrival of Quda'ah and his descendants, who established roots in Jeddah, Quda'ah is the second son of Ma'ad bin Adnan. He was the nineteenth grandfather of Prophet Muhammad Peace Be Upon Him. If we calculated the years from each generation, it might be concluded that the establishment of Jeddah was eight centuries earlier prior to the arrival of Islam (Al-Ansari, 2018). According to some sources, Jeddah was named after an ancestor, Jeddah bin Jarm

bin Raban bin Quda'ah (Ali, 2001). In subsequent years, Abu Khuza'a Amr bin Luhay is believed to have settled in Jeddah approximately five centuries before the rise of Islam (Al-Tabari, 1967).

In the following centuries, during the reign of the Persian king Khosrau Anushirwan, the grandson of Yazdegerd, who took control over the area between 531 and 579 AD. The king was mentioned that he passed Jeddah travelling from Abyssinia "Ethiopia" and Yemen in the south of the Arabian Peninsula and the southern coasts of the Bahr Al-Qalzum (Malouf, 1908). Following the decline of the Persian city of Siraf, its inhabitants migrated to Jeddah they constructed the city's initial wall using "kashur" stones, though they eventually abandoned the area due to prolonged drought conditions (Ibn al-Mujawar, 1951). From this evidence (Al-Ansari, 2018) believed that Persian has influences in the construction of Jeddah in the early stage of its establishment. Finally, it is believed that Jeddah is more ancient than various scholars imagined. (Justinia, Al-Sharif, Abu Zaid, 2020).

2.1.2. Islamic Era

With the advent of Islam, Jeddah evolved into a key port and entryway to Mecca, becoming a hub for trade and a repository for goods of the Quraysh tribe. The Battle of Badr highlights the significance of Jeddah during this period, as the Prophet Muhammad (Peace Be Upon Him) requested a ransom of spears located in Jeddah from a captured Quraysh leader, Nawfal Ibn Al-Harith (Ibn Faraj, 1988). Following his conversion to Islam, Nawfal was appointed to manage the affairs of Jeddah (Ibn Faraj, 1988). The city's strategic importance was further underscored when, in the ninth year of Hijra, the Prophet dispatched Alqamah bin Majzar al-Madlaji to Jeddah in response to reports of Abyssinian "Ethiopian" activity in the nearby waters (Ibn Faraj, 1988).

During the Caliphate of Omar ibn Al-Khattab, the Abanos and Al Ateeq Mosques were constructed, both of mosques were considered as the oldest mosques in Jeddah. (Al-Hadrawi, 1909). Later, in 26 AH, Jeddah was officially designated as the main port of Mecca by Caliph Othman bin Affan, reflecting its role in facilitating the movement of goods for construction projects such as the restoration of the Kaaba (Justinia, Al-Sharif, Abu Zaid, 2020).

2.1.3. Umayyad And Abbasid Caliphate Era

During the era of Umayyad caliphate, Jeddah remained under the control of Hijaz ruler and subordinated to his power. After the fall of Umayyad caliphate Abbasid caliphate rise and ruled the Hijaz, during the era of Abbasid Jeddah received support for infrastructure development. Caliph Abu Jaafar Al-Mansur contributed resources for the city's growth (Ibn Faraj, 1988). During Caliph Al-Mahdi's, Jeddah served as a key logistics point, facilitating the transport of marble for the expansion of the Holly Mosque in Mecca (Al-Azraqi, 838). This role in facilitating regional trade and religious projects highlights Jeddah's importance during these eras.

2.1.4. Ayyubid And Mamluk Era

The rulers of Mecca relinquished the taxes collected from pilgrims in Jeddah after Caliph Saladin assured them of compensation. The Ayyubid caliphate continued to govern Hijaz, and Jeddah remained a vital

trading hub during this period, although commercial caravans did not arrive directly; all goods reaching it came from the port of Aden (Baqqasi, 1980).

During the Mamluk era, the significance of the port of Aden diminished, as merchants shifted their attention, resulting in only three ships from India and the Arabian Gulf docking there throughout the year (Birin, 1963). In contrast, Jeddah experienced significant developments that transformed its port into a global harbor, with ships and vessels arriving directly at Jeddah. By the year 830 AH, the number of ships arriving in Jeddah reached forty, and from 835 AH onwards, Chinese merchants began to follow the same route directly to Jeddah (Al-Sulaiman, 1973).

After this prosperity, the Portuguese, following the opening of sea routes to India via the Cape of Good Hope, aimed to monopolize trade in Indian products that passed through the Red Sea and the Arabian Gulf (Birin, 1963). In response to Portuguese ambitions in 915 AH, Sultan Qansuh al-Ghuri ordered one of his commanders, Husain al-Kurdi, to construct a wall around the city of Jeddah. Husain al-Kurdi successfully completed the wall in less than a year and fortified it with well-structured towers (Al-Sibai, 1999).

2.1.5 Ottoman Empire Era

The Ottoman caliphate established its authority over the Hijaz and took possession of the relics of the Prophet and the keys to the holy mosques (Farid Bik, 1981). Sultan Selim consulted with the dignitaries and judges of the Hijaz regarding its affairs (Shishah, 1986). The Ottoman Sultan appointed a deputy in Jeddah, known as the "Sanjak of Jeddah," and allocated him half of the port's revenues (Al-Ma'abadi, 1993). In 1541, the walls and fortifications of Jeddah played a significant role in protecting the city from the Portuguese (Al-Sibai, 1999). In 1803, Prince Saud Al-Kabir ruled the city of Jeddah and agreed to let Sharif Ghalib remain as the ruler of Mecca, with his rule being subordinate to Prince Saud (Al-Sibai, 1999). In 1808, the Ottoman Sultan commissioned Muhammad Ali, the Wali of Egypt, granting him official authority over the Hijaz and appointing his son Ibrahim as the Wali of Jeddah. Muhammad Ali governed the Hijaz in this capacity until 1839, when a treaty was signed reinstating Ottoman rule in the Hijaz once again (Al-Ma'abadi, 1993).

2.1.6. Kingdom of Hejaz and Najd Era

After the Great Arab Revolt in 1916 AD, Jeddah came under the governance of Al Ashraf (Al-Ansari, 2018). This continued until King Abdulaziz Al Saud integrated Jeddah into his rule on December 23, 1925, which marked the beginning of a new era of development and modernization for the city (Al-Ghamdi, 2000).

2.1.7. Kingdom of Saudi Arabia

On September 23, 1932, the unification of the Kingdom was completed, officially forming the Kingdom of Saudi Arabia, which endures to this day.

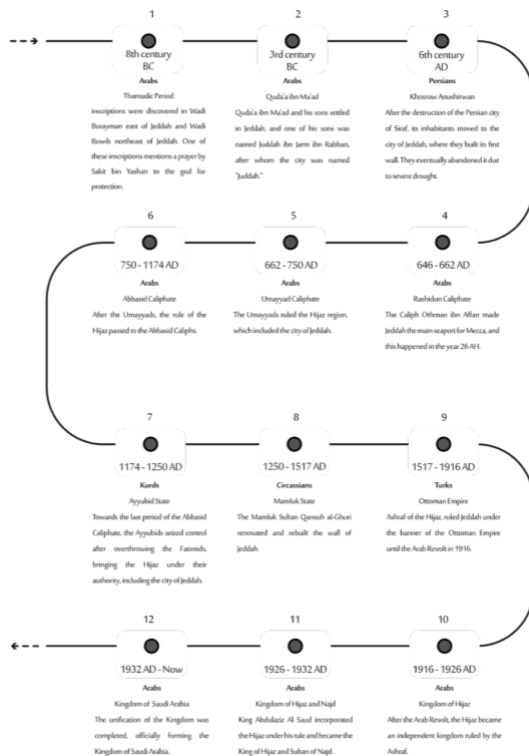


Figure 2. Historical timeline of Jeddah from the early stage of Islam to present day. (Source: Author)

2.2. Jeddah Historical City Developments

The first map of Old Jeddah was drawn by Ibn al-Mujawar in his book Tarikh Al Mustabsir in the seventh century AH. However, the illustrative map was unclear and the author in this case attempted to redraw the original map as shown below. He drew the boundaries of Jeddah in the form of a circle, and the west direction in it was replaced with the north direction in relation to modern maps. With this brief definition of the map, it can be identified that there is any historical source for this evidence. Although the map did not provide sufficient information about the landmarks and places, the map showed information about the approximate condition of the city of Jeddah in that period.

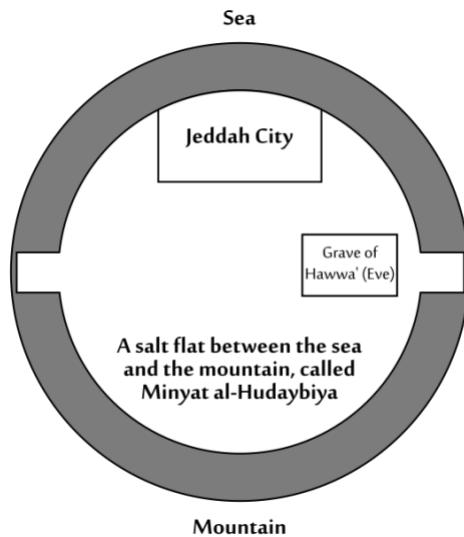


Figure 3. Redrawn Map by the author of Ibn Al Mujawar Taken from Tarikh Al Mustabsir Book

The map (Figure 3) shows that Jeddah is adjacent to the sea, with a limited area which is not used by the rest of the surrounding area, and it shows the grave of Eve, which Ibn al-Mujawar believes that Eve was buried in Jeddah. The grave appears outside Jeddah, far from urban area, which shows indication that Jeddah has small area in that period. He also explained that what is between the sea and the mountains is a sabkha (a flat land is oozing and salty). Below are maps of the transformation of Jeddah over a period of years taken from maps and additional sources and then redrawn by the author.

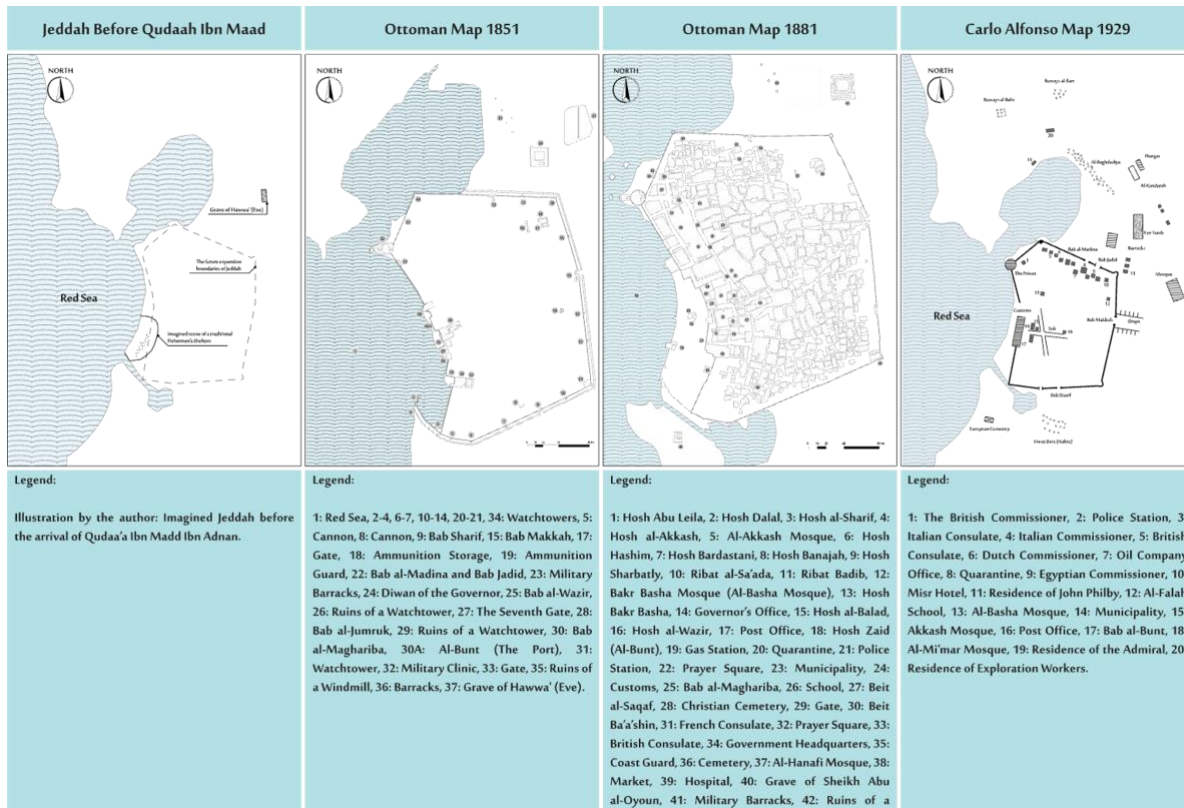
2.2.1. Jeddah Historical Gates

Historical Jeddah has 8 gates, which are: Bab Makkah to the east, Bab Sharif to the south, Bab Al-Nafi'a to the west, also called Bab Al-Farda, Bab Al-Suba to the west, also called Bab Al-Bunt, Bab Al-Maghariba, and a secondary gate, Bab Seraif, and to the north, Bab Al-Madina (Justinia, Al-Sharif, Abu Zaid, 2020). The eighth gate, which is a Bab Jadid to the north, was added in 1937 AD and is in the east of Bab Al-Madinah (Al-Amiri, 2014).

2.2.2. Jeddah Historical Neighborhoods

Historical Jeddah consisted of four urban areas with differences in terms of area which show the indication of urban growth prior to the demolition of boundary wall. All of neighborhoods called in Arabic with Harat will be explained as follow:

A) Harat Al Yaman: It represents the urban extension of Jeddah towards the south and southeast.



The gate
of this

**Figure 4. Maps of Jeddah City Development from Various Sources
Redrawn by Author**

neighborhood is Bab Sharif. (Al-Ansari, 2018).

B) Harat Al-Bahar: It occupies the southwestern part of the area, and it is considered an extension of Al-Yaman neighborhood to the west. This neighborhood is urbanized and classified as one the most organized neighborhood. This can be seen from the commercial activity where there are tremendous merchants trading in such area (Al-Ansari, 2018).

C) Harat Al-Mazloun: It is an extension of Al-Bahar neighborhood to the east to Bab Makkah it represents the growth of the city towards the east. (Al-Ansari, 2018).

D) Harat Al-Sham: It represents the basic nucleus for the launch of urban growth towards the north and the compass of its growth. This neighborhood is considered as the most luxurious neighborhood compared to others. This can be seen from the majority of inhabitants with high income and merchants (Al-Ansari, 2018).



Figure 5. Map of the gates and neighborhoods of historical Jeddah, drawn by the author.
 (Source: Author, 2024)

Furthermore, Historical Jeddah boundary wall has a quadrilateral shape with an area of about (900-1000) yards from north to south and between (800-900) yards from east to west (Al-Ansari, 2018). In 1961, two streets were created that had a major impact on changing the urban fabric of historic Jeddah. They were Al Dahab Street, which extended from the north in front of Bab Jadid to the south in front of Bab Sharif, and Mua'sasat Al Naqad Street, which extended from the west in front of the bank to reach Al Dahab Street. Many buildings were demolished for the development of these two streets, especially Al-Dahab Street. (Al-Amiri, 2023).

The aerial photo below (Figure. 6) shows the condition of historic Jeddah boundary wall after massive demolition. This demolition was the beginning of urban heritage restoration program initiated by the government of Saudi Arabia as well as preserved historical sites within the area. This renovation has affected most of the historical Jeddah area outside the wall, while the buildings were preserved within the old wall.



Figure 6. An aerial photo of historical Jeddah from the east after the recent removal work (Source: Al-Ghamdi, 2022)

2.3. Architectural Elements in Historical District of Jeddah

2.3.1. Building Material and Construction Method

The most common element in all the traditional buildings of Jeddah is the coral stone (Limestone) a rather coarse texture, the typical coral stones are called locally (Manqabi) stones, they are squared on one facing, and usually beveled roughly, there is also a type of Manqabi stone known as Kashur, which has a yellowish hue due to the presence of coral impurities. In addition, (Nora) is a lime-based material made of calcium hydroxide, white in color or slightly brownish if impurities are present, it is used after being mixed with soil materials and water as mortar in plastering and flooring. Moreover, it could apply in coatings as a paint by simply mixing it with water. (Adas, 2010).



Figure 7. Manqabi stone and Nora as basic material for buildings in Historical Jeddah District (Source: Author, 2024)

2.3.2. Color of Building

A variety of colors are used in historical Jeddah, mostly on wooden elements such as doors, windows, inspired by the colors of wood and coral reefs. Colors used for painting façade elements of historical buildings include green, blue, brown, grey, chocolate, and Nora colors.



Figure 8. Combination of Colors Used in Historical Jeddah Building (Source: Author, 2024)
2.3.3. Acroters (Arayes, Shabura, and frieze)

Acroters are decorative architectural elements positioned at the ends of building facades. (Arayes) typically take the form of arrows and are integrated into the building's structure, while (Shabura) consists of a set of wooden columns connected to a wooden beam, placed in a cavity at the end of the building. Beyond their aesthetic role, these elements serve a functional purpose by preventing water from seeping into the walls and helping to preserve the structural integrity of the building. Additionally, the (frieze), a protruding feature at the top of walls, doors, windows, or column capitals, serves both decorative purposes and helps reduce the amount of rainwater reaching the walls. (Adas, 2010).



Figure 9. Arayes and Shabura in Historical Jeddah Buildings. (Source: Author, 2024)
2.3.4. Arches

An arch is a curved architectural element with various forms, created by arranging stones or bricks in a special pattern to form an arched line above openings. Arches come in different types, including semicircular, segmented, pointed, lobed, and serrated arches. They are commonly used independently or placed above windows, doors, and openings, serving both structural and decorative purposes.



Figure 10. Arches of Historical Jeddah Building. (Source: Author, 2024)

2.3.5. Al-Manjour

Hijaz, especially Jeddah, was famous for its carpentry artistry, Al-Manjour consists of interlocking wooden panels that are intricately carved, sculpted, and hand-decorated. These panels are commonly used externally in building openings, windows, and doors, enhancing the aesthetic appeal of structures. (Adas, 2010).

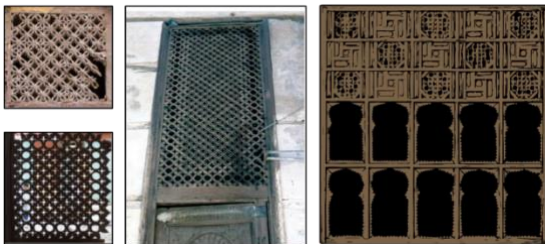


Figure 11. Al-Manjour in Historical Jeddah Buildings. (Source: Greenlaw, 1976)

2.3.6. Doors

Jeddah's rich tradition of carpentry craftsmanship is reflected in its doors, which are typically crafted by skilled artisans specializing in wood engraving and carving. These doors are made from a single, large piece of wood, intricately carved and engraved to ensure durability and strength, allowing them to remain coherent and robust for many years.



Figure 12. Figure 12. Doors of Historical Jeddah Buildings. (Source: Greenlaw, 1976)

2.3.7. Windows and Openings

The shapes of windows in Jeddah's architecture vary significantly, featuring designs that include single-sash and multi-sash configurations. Window openings are typically oriented toward the prevailing winds to maximize airflow. They are often elongated with large areas to achieve an aesthetic appearance while facilitating air circulation and managing high humidity levels.



Figure 13. Windows of Historical Jeddah Buildings. (Source: Greenlaw, 1976)

2.3.8. Ornaments

Jeddah architecture is recognized by different types of decoration that can be divided into three categories such as geometric decorative units, floral units, and text decorative units. Wood, gypsum, or plaster is used for high-relief decoration, and lime dyes or paint are used for decorative on smooth surfaces using chisels. Geometric shapes are the most famous decorative art in Jeddah.



Figure 14. Inscription and Decoration of Historic Jeddah Buildings. (Source: Adas, 2010)

2.3.9. Taklelah (Wood Beams)

Taklelah is a traditional wooden structural element used to reinforce walls in buildings. Positioned vertically at intervals of 1 to 1.5 meters, these beams are typically made from (Gandal) a mangrove tree from the Red Sea coast, valued for its strength and termite resistance. After laying the foundation, four to five rows of bricks are built, followed by mortar, a beam is placed on the outer wall's edge and a corresponding beam is on the interior edge. These beams are connected at the building's corners or window openings using wooden pieces called (Al Yad), then the mortar is applied over the beam, and another five rows of bricks are laid, continuing the process. (Adas, 2010).



Figure 15. Wood Beams of Historical Jeddah Buildings. (Source: Author, 2024)

3. Research Methodology

Research in exploring control and analysis of architectural elements in the design of historical mosque with a case study of Al-Jilani Zawiya in Historical Jeddah is primarily qualitative, including literature review and direct observation to the site. The flow of research consists of five stages which will be explained more comprehensively as follow.

At the first stage, the author conducts direct field visits to local authority in order to identify related information regarding Historical Jeddah development program. The authority includes branch of the general authority for endowments, the ministry of culture, and Al-Balad Municipality (Beit Al-Balad).

At the second stage, the author conducts technical survey for measuring cadastral elevation of site. This identification method uses contemporary surveying techniques, including laser scanning devices, 3D scanning, digital measuring tools, and CAD programs. In this phase, the author was assisted by the surveying team from Abnia Consulting Engineers led by the director surveying department, engineer Essam. Rizk and under the supervision of author.

At the third stage, the author documents all of site condition by taking photographs and video related to subject of research.

At the fourth stage, the author conducts literature review by reading and exploring information related to subject of research from a wide range of sources such as academic journal, books, and reports.

At the fifth stage, after all of documentation process the author attempted to recreate historical plans and documents based on direct observation and internal analysis. The control and analysis of architectural elements is explored through the following basic points such as type of mosque and size, shape of mosque from different angles, dimensions and total area of mosque, exterior façade of mosque, architectural elements of mosque, and material used for mosque construction.

4. Result and Discussion

This chapter will focus on controlling and analyzing the architectural elements in the design of Al-Jilani Zawiya, a historical mosque in Jeddah. The analysis will begin with the classification of the mosque according to its size and general shape, followed by an examination of its dimensions and total area. The study will also include an analysis of the mosque's external facades, as well as its general location within the city. The distinctive architectural elements of Al-Jilani Zawiya will be examined, along with an analysis of the materials used in its construction to determine their impact on the final architectural character. This chapter aims to gain a deeper understanding of the design of Al-Jilani Zawiya in historical Jeddah and how it reflects the local culture and heritage of the city.

4.1. Expert's Perspective on Traditional Architecture of Jeddah's Mosques

The traditional architecture of Jeddah's mosques, according to Engineer Abdullah Bukhari, reflects simplicity, austerity, and functionality. The typical floor plan of these mosques (Jami') consisted of an open courtyard (sahn) and a large prayer hall, both roofed with stone and wood. The mihrab - and no other - was distinguished by some decorations and Qur'anic verses, while the rest of the mosque remained plain (Bukhari, 1981). Each mosque (Jami') typically featured one minaret located in the southwestern corner of the courtyard, allowing the northwest winds to carry the call to prayer across the city. In rare cases, geometric designs were used to embellish the mosque's main entrances (Bukhari, 1981).

4.2. Historical Observations of Jeddah's Mosques

Several historical accounts provide insight into the number and distribution of mosques (Jami') in Jeddah. The traveler Tamisier, who visited Jeddah in 1834, noted that "the city had five Jami' mosques where worshipers gathered for congregational prayers, although there were many smaller mosques" (Tamisier, 2001). Similarly, Ayyoub Sabri Pasha recorded in *Mirat al-Jazeera* (1884) that Jeddah had five Jami' mosques and thirty smaller mosques (Ayyoub Pasha, 1999). Ibrahim Rifat Pasha, in *Mirat Al-Haramain* (1925), confirmed these figures and described Jeddah's thirty smaller mosques as being furnished with beautiful, clean mats that became damp in humid weather. These mosques were typically elevated three meters above street level and accessed by stone stairs but lacked ablution areas and toilets (Ibrahim Pasha, 1925).

4.3. Jeddah's Grand Mosques (Jami') and Their Significance

According to the references used in this research, including the description of former Jeddah Mayor Engineer Mohammed Saeed Farsi (International Symposium on Islamic Architecture and Planning) and

Engineer Abdullah Yahya Bukhari (The Architecture of Old Jeddah, Characteristics and Development), Jeddah historically had five major Jami' mosques, while the rest were smaller prayer spaces or Zawiya. The grand mosques (Jami') were Al-Basha Mosque, Al-Shafi'i Mosque, Akash Mosque, Al-Mimar Mosque, and Al-Hanafi Mosque. Some sources also classified Al-Maghribi Mosque as a grand mosque (Jami'), though this classification is not common recognized.

4.4. Distribution of Historical Mosques (Jami')

An analysis of Jeddah's Mosque distribution map (Figure 16) reveals that these Jami' mosques were concentrated in Jeddah's historical Suk (markets), reflecting the close relationship between religious and commercial life in Jeddah. Al-Shafi'i Mosque was situated in Suk Al-Jami', while Al-Hanafi Mosque overlooked Qasbat Al-Honod, the former trade center for Jeddah's Indian community, which was removed during the construction of Al Dahab Street in 1961. Al-Hanafi Mosque also stood near Suk Al-Nada. Akash Mosque was located on Qabel Street, Al-Mimar Mosque faced Suk Al-Alawi, and Al-Basha Mosque was the starting point of Suk Al-Nada. Al-Maghribi Mosque, if classified as such, was positioned at the intersection of Suk Al-Alawi and Suk Al-Badu, overlooking Bab Makkah. The concentration of these mosques within Jeddah's historical markets underscores their significance as centers of community life, deeply connected to the city's cultural and economic activities. This relationship between mosques and markets reflects Jeddah's rich cultural and religious heritage, which has flourished for centuries, and remains a source of pride for its residents and visitors.

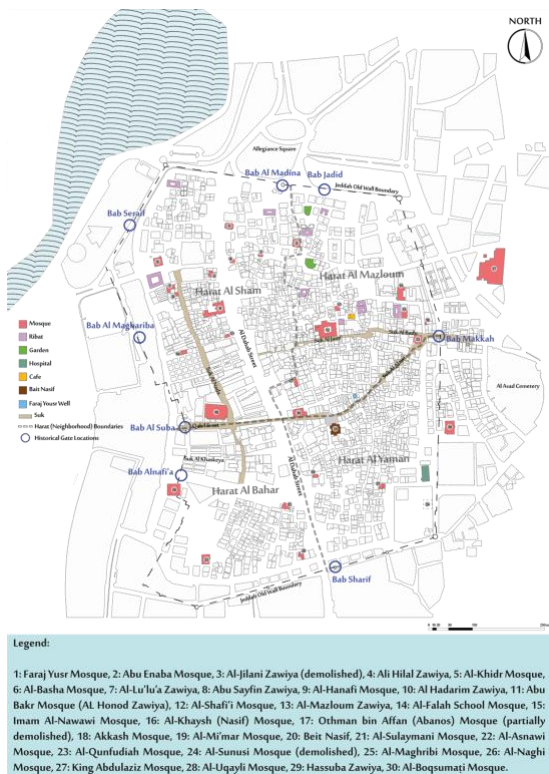


Figure 16. Distribution of Historical Mosques in Jeddah Historical District. (Source: Author, 2024).

4.5. Demolition and Preservation of Historical Mosques in Jeddah

By passing the time, the deterioration of the structural condition of many mosques happened due to the lack of care and changing needs, inability for adaptation to the modern era has been reason for their demolition by the residents and they were replaced with modern structures. Examples of demolished mosques include Al-Basha Mosque, Al-Jilani Zawiya, Faraj Yusr Mosque, Al-Maghribi Mosque, Al-Sunusi Mosque, and Othman Ibn Afan Mosque (Abanos). Some of these were rebuilt, while others were lost without replacement.

However, several historical mosques have remained intact, although they have been altered to adapt to modern needs. Among these are Al-Shafi'i Mosque, Al-Hanafi Mosque, Naseef Mosque, Al-Khidr Mosque, Akash Mosque, and Al-Lu'lu'a Mosque. These mosques retain their historical significance and continue to be vital components of Jeddah's religious and cultural landscape.

4.6. The Importance of Restoration and Preservation Efforts

Jeddah's historical mosques are an integral part of the city's Islamic and cultural heritage. Identifying mosques that require restoration, and preservation is crucial to maintaining this cultural legacy. Initiatives like Prince Mohammed bin Salman's project to restore historical mosques in Jeddah are essential in ensuring that

these architectural and religious treasures are safeguarded for future generations. Sustained and consistent efforts are necessary to preserve this vital aspect of Jeddah's history and heritage. This can be contributed to by a detailed study of the historical mosques in Jeddah and identifying the mosques which need restoration and preservation.

Increasingly, A historical aerial photograph of Jeddah Below (figure 17) taken from the British Envoy's Residence from the Royal Geographical Society (RGS) archives showing several prominent minarets. From right to left, the minaret of Al-Mi'mar Mosque is shown, followed by the minaret of Al-Hanafi Mosque, then the minaret of Al-Lu'lu'a Mosque, and finally the minaret of Al-Basha Mosque.



Figure 17. Aerial photograph of Historical Mosques Distribution of Historical Jeddah (Source: Royal Geographical Society RGS Archives, 1937).

Below figure (18) is A historical aerial view of Jeddah showing several prominent minarets. From right to left, the minaret of the Al-Lu'lu'a Mosque is shown, followed by the minaret of the Hanafi Mosque, then the minaret of the Al-Mi'mar Mosque, and finally the minaret of the Shafi'i Mosque.

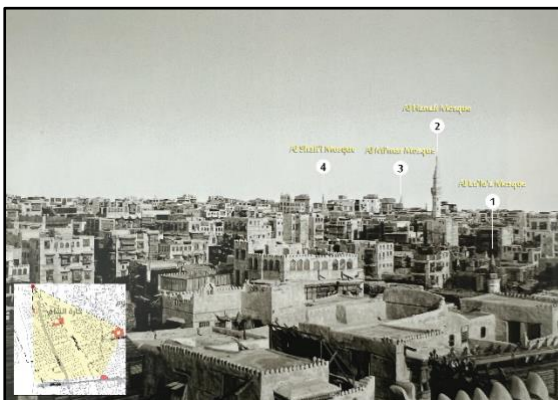


Figure 18. Aerial photograph of Historical Mosques Distribution of Historical Jeddah in 1917 (Source: Unknown, 1917).

Below figure (19) is a historical aerial photograph of Jeddah, according to historian Talal Bakr Al-Amiri, he believed that to have been taken by the British Navy, taken from the northeastern side of the city, showing several prominent minarets. From right to left, a minaret that author could not confirm belongs to any

of Jeddah's historical mosques, considering that the Faraj Yusr Mosque and Abu Enaba Mosque are located near this area, then the minaret of Al-Basha Mosque appears, followed by the minaret of Al-Hanafi Mosque.

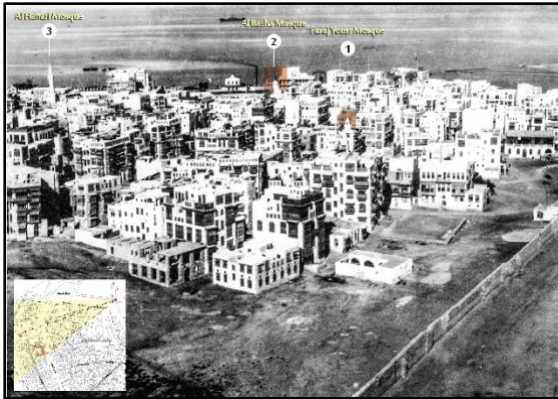


Figure 19. Aerial photograph of Historical Mosques Distribution of Historical Jeddah in 1926 (Source: British Navy, 1926)

Below figure (20) is a historical aerial photograph of Jeddah from the Aramco archives taken from the northwest, showing several prominent minarets. From right to left, the minaret of Al-Hanafi Mosque is visible, followed by the minaret of Al-Mi'mar Mosque, and finally the minaret of Al-Sunusi Mosque.



Figure 20. Aerial photograph of Historical Mosques Distribution of Historical Jeddah in 1948 (Source: Aramco, 1948)

4.7. Al-Jilani Zawiya

Al Jilani Zawiya is a small square prayer hall with a very small rectangular minaret. It is in Al-Sham neighborhood near Abu Enaba Mosque on Al-Bazan Lin branching off Al-Dahab Street. There is a well on its western side, which is used for drinking and ablution. Al-Jilani Zawiya is distinguished by a different and unique design from the rest of the historical mosques of Jeddah. It was demolished in 1946 AD due to the aging of the building. There was a water tank next to it to the east that was filled through the well. The area of the mosque was increased, and the well was covered with steel and included within its area. It was rebuilt in a

modern way, until the modern building also collapsed in 2021, and nothing has been built in its place until present day.

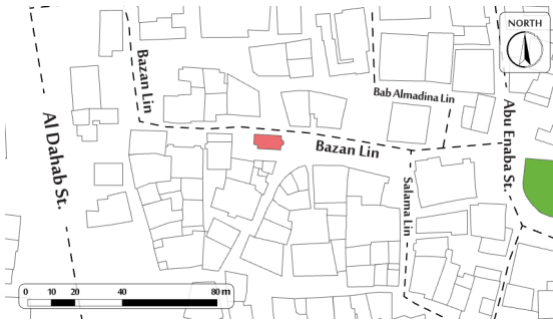


Figure 21. Map of the location of Al-Jilani Zawiya, drawn by the author based on Jeddah Municipality base map, 2022. (Source: Author, 2024)

4.8. Architecture Elements of Al-Jilani Zawiya

Al-Jilani Zawiya was constructed using Manqabi Stone (Limestone), a material typical of most historical buildings in Jeddah. However, its design stands out from the other historical mosques in the area, as it is the only zawiya featuring domes on its roof. The building is relatively small, comprising a single floor, and is based on a rectangular plan with slightly irregular dimensions: the western and eastern sides measure 12 meters. In comparison, the northern and southern sides are 10 meters in length.

The internal plan is divided into two halves that support the roof. The mosque features three domes arranged in a linear sequence, all located in the southern half of the structure. A large central dome is flanked by two smaller, identical domes. Except for the southern facade, all the mosque's facades stand independently, not adjoining any neighboring structures. The upper edges of the facades are adorned with a series of Acroters (Arayes), creating a distinct decorative termination.

The northern facade, which includes the side entrance and minaret, contains a single door and one window. The western facade serves as the main entrance and includes five windows, four of which share a consistent design, while one, positioned to the west, differs in style. The eastern (qibla) facade features the mihrab centrally, flanked by two windows, with the three domes prominently crowning the structure.

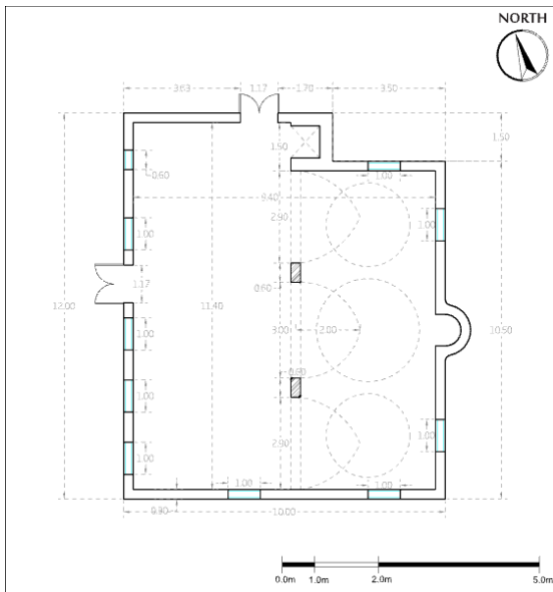


Figure 22. Ground floor plan of Al Jilani Zawiya. (Source: Author, 2024)

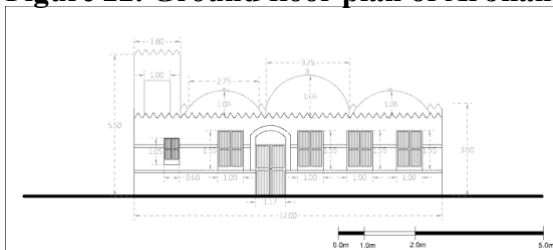


Figure 23. Western Facade of Al-Jilani Zawiya. (Source: Author, 2024)

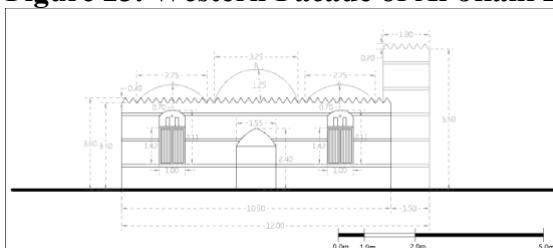


Figure 24. Eastern Facade (Qibla) of Al-Jilani Zawiya. (Source: Author, 2024)

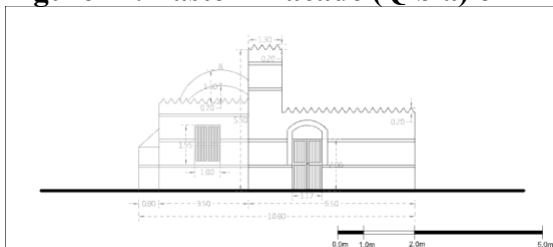


Figure 25. Northern Facade of Al-Jilani Zawiya. (Source: Author, 2024)

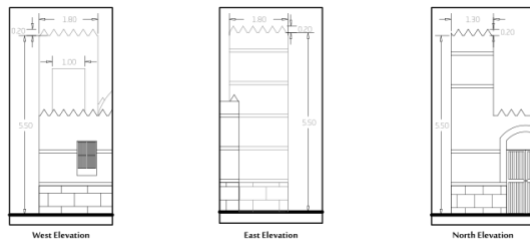


Figure 26. The Shape of Minaret from Different Elevations. (Source: 2024)

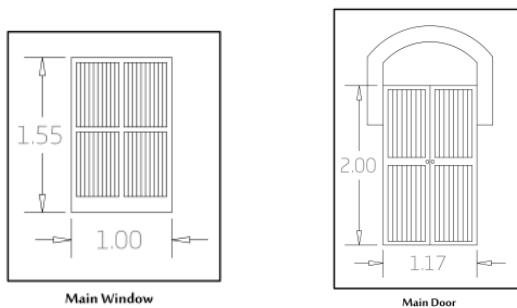


Figure 27. Elevation of Al-Jilani Zawiya Door and Window Design. (Source: Author, 2024)

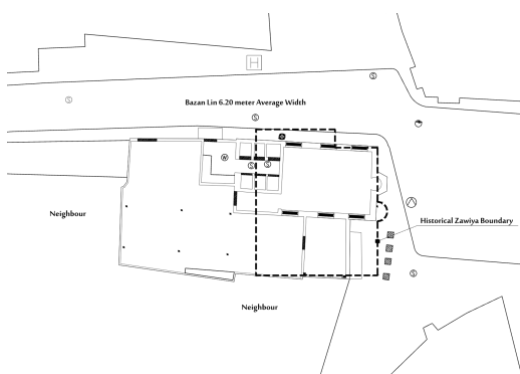


Figure 28. Topographic Survey of Al-Jilani Zawiya. (Source: Author, 2024)



Figure 29. A historical image of Al-Jilani Zawiya, the French Military Mission, 1895-1910. (Source: French Military Mission, 1895-1910)



Figure 30. Comparative condition of old Al-Jilani Zawiya 1910 and Contemporary Al-Jilani Zawiya 2020. (Source: Author, 2024)



Figure 31. Comparative condition of old Al-Jilani Zawiya 1910 and Contemporary Al-Jilani Zawiya 2020. (Source: Author, 2024)



Figure 32. Existing Location of Al-Jilani Zawiya after Demolition. (Source: Author, 2024)

5. Conclusion

Al-Jilani Zawiya, situated in the historical district of Jeddah, was a significant testament to the city's cultural and architectural heritage before its demolition in 1946. Integrating locally sourced materials, such as coral stone, with traditional Islamic architectural motifs exemplified the Zawiya's unique role in Jeddah's historical fabric. This synthesis of local craftsmanship and religious architectural forms not only reflected the aesthetic values of the region but also underlined the broader socio-cultural importance of such structures within Jeddah's urban landscape.

From an architectural perspective, coral stone, a locally sourced material, was pivotal to the Zawiya's construction, providing both visual appeal and functional benefits. Its natural thermal insulation properties made it ideal for Jeddah's arid climate. The minaret, while simple in design, displayed a short rectangular form characteristic of Islamic architecture, and its understated decorative elements contributed to the Zawiya's architectural distinction. Additionally, the inclusion of domes in the Zawiya's design, an uncommon feature in the traditional mosques of Jeddah, further reinforced its architectural uniqueness and symbolic significance.

In terms of ornamentation, the Zawiya featured manjour latticework on its windows, a characteristic design element that allowed for natural ventilation while maintaining privacy, a crucial consideration in Islamic architecture. Acroters (Arayes) further enhanced its aesthetic identity.

The spiritual and functional importance of the Zawiya was also reflected in its religious features. The Qibla wall, aligned towards Mecca, and the recessed mihrab niche, signifying the direction of prayer, underscored the building's role as a place of worship and community gathering. The three domes that once crowned the structure were particularly significant, both architecturally and symbolically, as domes often serve as metaphors for the celestial in Islamic architecture, linking the spiritual with the physical realm.

Despite its demolition in 1946, and the subsequent construction and later destruction of a mosque on the same site in 2021, the current vacant state of the Zawiya's location calls for an urgent reexamination of Jeddah's architectural preservation strategies.

In the final notes, the authors emphasize the need for ongoing research into the historical mosques within the Jeddah historical district. Investigations into their interior design, spatial arrangements, and social contexts are essential. Such studies will not only foster the development of cultural heritage in Jeddah but also provide valuable insights that support the preservation of indigenous mosques throughout the Kingdom of Saudi Arabia in the future.

Acknowledgements

This article is derived from a master's thesis titled "*Control and Analysis of the Architectural Elements Adopted in the Design of Historical Mosques in Jeddah*" by Abdullah Nahad Aburifaie, conducted under the supervision of Dr. Ayad K. Almainani, Department of Architecture, Faculty of Architecture and Planning, King Abdulaziz University.

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"ضبط وتحليل العناصر المعمارية في تصميم مساجد جدة التاريخية: دراسة تاريخية ووصفية لزواية الجيلاني"

الملخص:

تتميز عمارة المساجد في مدينة جدة التاريخية بخصائص فريدة من حيث عناصرها وثقافتها وفلسفتها. وتعتمد الدراسة على ضبط وتحليل العناصر المعمارية لزواية الجيلاني التاريخية في المنطقة التاريخية بجدة. الهدف الرئيسي من هذه الدراسة هو استكشاف العناصر المعمارية لزواية الجيلاني وتوفير وثائق معمارية يمكن أن تساعد في الحفاظ على تراث المنطقة التاريخية بشكل أكبر. منهجية الدراسة نوعية بما في ذلك مراجعة الأدبيات والملاحظة المباشرة واستخدام الأجهزة الرقمية. تتضمن مراقبة وتحليل العناصر المعمارية للمساجد التاريخية وتوزيعها في المنطقة، وتحليل زواية الجيلاني، وتحليل العناصر المعمارية لزواية الجيلاني. تظهر النتائج أن زواية الجيلاني في المنطقة التاريخية بجدة تحتوي على عناصر معمارية مهمة من الناحية التاريخية. وكذلك تتضمن عناصر تراثية فريدة تمزج بين العمارة التقليدية والتأثيرات المعمارية المحلية. وفي الختام، تلعب العناصر المعمارية لزواية الجيلاني دوراً مهماً في تأصيل وظيفة المسجد وبنيته. وتوصي هذه الدراسة أيضاً بإجراء المزيد من البحوث فيما يتعلق بالمسجد التاريخي في منطقة جدة التاريخية من وجهات نظر مختلفة مثل التصميم الداخلي، والتخطيط الحضري، والبعد الاجتماعي.

الكلمات المفتاحية: العناصر المعمارية، المسجد التاريخي، جدة التاريخية، المملكة العربية السعودية.