YAŞAR UNIVERSITY
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MASTER THESIS

CONTEMPORARY RE-EVOLUTION OF TRADITIONAL MOSQUES IN IRAN

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ABSTRACT

CONTEMPORARY RE-EVOLUTION OF TRADITIONAL MOSQUES INTERIOR ARCHITECTURE IN IRAN

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This study considers the architectural characteristics of mosques in Iran from the initial date of constructing to the contemporary ones. Iranian architecture is one of the world's reputable architectures. It was one of the most significant architectures in the medieval Islamic world. Iranian architecture has expanded over millenary in reply to its religion. All traditional and indigenous Mosques in Iran exhibit that their architects had been so bright in coordinating Iranian religion and architecture in the past. The selected cases are outstanding examples of contemporary mosques in Iran. Five modern mosques in various cities of the country was determined and evaluated as case studies. Their architects are innovative in their design intention and demonstrate their own project approach and explanation outside the mainstream of contemporary mosque design in Iran. Different aspects like material, plan, construction method, design and other features are considered in this thesis. For this purpose both qualitative and participant-observation were used as research method. On this basis, this study indicates that Iran, as a country with rich and unique architecture, unfortunately does not benefit the contemporary methods in mosque architecture because of public beliefs and government's policies.

Key Words: Traditional Mosque, Contemporary Mosque, Mosque Design, Iran.

ÖZ

İRAN'DAKI GELENEKSEL CAMİLERİN, ÇAĞDAŞ OLARAK YENİDEN DEĞERLENDİRİLMESİ

Elnaz BARRY
Yüksek Lisans Tezi, İç Mimarlik
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Bu çalışma İran'daki camilerin mimari özelliklerini, yapım aşamasından günümüze kadar olan kısmını incelemektedir. İran mimarisi, dünya'nın saygın mimarilerinden biridir. Ortaçağ İslam dünyasında, en önemli mimarilerden biri olarak sayılmaktadır. İran mimarisi İslam dinine yanıt olarak bin yılı aşkın sürede yayılmıştır. İran'daki tüm geleneksel camiler, geçmişteki mimarların "din ve mimari" koordinasyonunu çok açık bir şekilde gösterdiklerini sergilemektedir. Belirlenmiş olan camiler, İran'daki çağdaş cami mimarilerinin seçkin örnekleridir. Ülkenin çeşitli şehirlerinde bulunan beş modern cami belirlenmiş ve değerlendirilmiştir. Bu camilerin mimarları, tasarımda yenilikçiliği ve İran'daki çağdaş cami tasarımının ana akımının dışında kendi proje yaklaşımlarını sergilemektedir. Tez içerisinde; malzeme, plan, inşaat yöntemi, tasarım ve diğer görüşler gibi farklı yönler ele alınmaktadır. Bu amaç için, araştırma metodu olarak nitel ve katılımcı gözlem yöntemleri kullanılmaktadır. Bu temelde, zengin ve eşsiz bir mimariye sahip bir ülke olan İran'ın, kamusal inançlar ve hükümet politikaları nedeniyle cami mimarisinin çağdaş yöntemlerinden faydalanamadığı bu çalışmada belirtilmiştir.

Anahtar Kelimeler: Geleneksel Cami, Çağdaş Cami, Cami Tasarımı, İran.

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Finally, my deep gratitude and appreciation to my mother Mehry, my father Sohrab and my dear sister Laleh who are always supportive, loving and caring to me in every possible way in my life.

Elnaz Barry

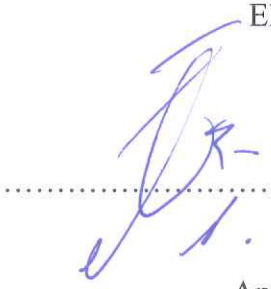
İzmir, 2018

TEXT OF OATH

I declare and honestly confirm that my study, titled "CONTEMPORARY RE-EVOLUTION OF TRADITIONAL MOSQUES INTERIOR ARCHITECTURE IN IRAN" and presented as a Master's Thesis, has been written without applying to any assistance inconsistent with scientific ethics and traditions. I declare, to the best of my knowledge and belief, that all content and ideas drawn directly or indirectly from external sources are indicated in the text and listed in the list of references.

Elnaz Barry

Signature



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April 8, 2018

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CHAPTER 1
INTRODUCTION

Throughout centuries, the mosque is the most repeated building type of different architecture styles. Mosque is a unique place of worship; so many mosques are built all over the world continuously. Religious architecture is a reflection of spiritual and social concerns, and besides that in mosque architecture identity that is expressed is based on cultural factors, tradition of construction and architecture.

The search for newness in architecture has affected the architecture of the mosque, which has a potential of being a landmark and symbol of identity. Modern human needs, new technologies and contemporary materials also have an important effect on mosque architecture. Contemporary designs can provide a good quality by utilizing more contemporary materials than in the past. Using new techniques, functional configurations, appropriate physical planning and creative design criteria can play an important role in designing new mosques. This topic of "newness" is strangely sensed in Iranian architecture. The mosque is an important building, which traverses both traditional and contemporary architecture in Iran. Even though users and the government are conservative about the architecture of new mosques in Iran, there are many contemporary examples, which have succeeded and won awards around the world. The architects of these examples had a chance to be innovative and interpret mosque architecture in the contemporary world. Because religious architecture is a sensitive subject especially in Iran and reflects cultural identity, the use of traditional elements in mosques have important effects on these significant examples.

Most of the studies about mosque architecture in Iran focus on the analysis of past examples. However, the aim of this thesis is to analyze the selected five contemporary cases in terms of traditional elements used in their design and analyze the modification of forms compared with pre-modern examples. The examples of the contemporary mosques that are analyzed in this thesis have an important contribution to religious architecture in İran and the development of contemporary examples. Nevertheless, these contributions cannot be understood without analyzing the past examples and architectural and interior elements of mosque architecture. In this framework, an evaluation of the selected modern mosques will be made with reference to past examples.

In this thesis, attention is given to religion and the traditional society, which has a constant ideology about modern mosques. The local government is one of the drawbacks in the country, despite the fact that some contemporary building designs in Iran won awards form important institutions like Aga Khan. This research has located this problem during its case studies. In this dissertation, attention is drawn to the use of modern materials, construction techniques, contemporary interpretations of past design traditions and integration of the traditional and contemporary mosque construction.

1.1. AIM OF STUDY

The aim of this thesis is to provide a projection to the design of the modern mosque in İran by analyzing five contemporary examples. The intention was based on the modern architectural specifications of the selected cases and the use of recent elements inspired by traditional design. A scrutiny of the history of mosques in Iran have common elements: pulpit, minaret, dome, courtyard, porch, and mihrab. The investigation consists of an examination of contemporary mosques from the past to the present.

On this basis, this thesis demonstrates that the shape, elements, plan and design of contemporary mosque have novelty in comparison to classical Islamic mosques. Contemporary mosque architecture should both represent the era and conserve the spiritual space relations of history. However, they should not imitate historical mosques.

1.2. THE OBJECTIVE OF THE STUDY

One of the objectives of this thesis is to give a brief history of Persian mosque architecture and take a glance at the history of the mosque from the beginning of their construction. It involves an analysis of their form, shape and materials. In addition, indicates by a review of building in modern style, which changes have taken place in buildings over the course of history.

The main objective of this thesis is to analyze the architectural forms, interpretation functions and use of traditional elements in contemporary mosques of İran. Five selected mosques are analyzed in order to understand their interpretation of the development of the Persian mosque architecture to arrive at a contemporary view.

1.3. THE SCOPE OF THE STUDY

The scope of the thesis is formed by five contemporary mosque cases. Three of them are in Tehran; one of them is in Isfahan and other last in Bushehr city. The selected contemporary examples are chosen from a list of mosque designed after the year 2000.These contemporary cases are analyzed in terms of their characteristics, form, shape and materials. Besides the main building, key analysis includes the library, shops, and spaces for recreation and the computer use.

The main emphasis of this thesis is on how the architects of the contemporary mosques dealt with using traditional architectural elements and interior features. Without knowing the past, it would be impossible to interpret contemporary architecture. Therefore, the scope of this thesis includes explanations about the history and all architectural interior characteristics and then investigates contemporary mosque architecture in Iran. Building elements are described in various subdivisions such as the architecture of the building, design concept, yard, material, and spaces. Then the construction is discussed, while the previous architecture of mosques and its transformation into modern design are examined. Most of the research focuses on the pre-modern mosque design and its elements or just one contemporary example. This thesis includes both past examples and their features, development of mosque architecture from past to modern design and investigation of five contemporary examples.

1.4. THE METHODOLOGY OF THE STUDY

The methodology of this study is developed in order to comprehend the architecture of Iranian contemporary mosque designs. Their evolution is analyzed. The methodology of this thesis includes a brief explanation about traditional mosques and their main architectural and interior characteristics. Then an analysis is made of five contemporary mosques, which are important representatives of contemporary mosque architecture. The use and analysis of traditional elements in contemporary mosque architecture is the focus point of this thesis.

This thesis adopted a qualitative research method. Data collection and analysis were the first steps of research. In the second stage of the study, all data were assembled and classified in terms of their architectural history. The qualitative nature of the method of this study and the source of all data were inescapable. A special analysis

was for the last case. Its site of construction was visited and all the structures carefully examined.

1.5. THE LIMITATION OF THE STUDY

In this thesis according to information about contemporary mosque in Iran, the case study included only five modern buildings located in several cities in the country. Getting information about some of the mosques needs special permission of the government and this was hard to get. In some cases, there is not enough information about how the process work and the completion date of the project.

CHAPTER 2
LITERATURE REVIEW

2.1. THE MEANING OF MOSQUE

Masjid is a term used for two meanings: the first meaning refers to a İslamic architectural form for mosque and the other is a place for praying (Ürey, 2010). Besides that, the literal meaning of the mosque is the place of prostration and correction. A mosque refers to a place of worship for God. The first meaning of the term mosque indicates a special quadrangle that is made for worship. The other, according to the narration of the Prophet, refers to all praying places across the earth (Frishman, 2002).

Praying is one of the most important spiritual needs of human beings, and its fulfillment requires a certain place. Religions have built their sanctuaries with the best of their talents, and in most impressive places, in order to guide individuals to prosperity and highlight the dimensions of worship. Meanwhile Islam as a comprehensive religion, all human needs have taken into account while building sanctuaries (Sanjag, 2016).

For this reason, in Muslim countries, mosques have been built on almost every street or district so that Muslims can attend to their daily prayers. Mosques can be found in numerous shapes, forms, sizes, the method of construction, design and embellishment of a mosque can reflect the era and area in which it has been constructed. The mosques are usually used for the Muslims' gathering together, but the main purpose of building mosques in all cities is for conducting Friday praying (Ürey, 2010).

The elementary and minimal function of mosques is to conduct a meeting, which has originated from Kaʿbah in Mecca (Figure 2.1). Generally, Mosques have one or more minarets, or towers. Minaret is a place from which the muezzin calls Muslims to pray for five times in a day (Shia people). In addition to their functional application, minarets are also a principle element in mosque architecture (Mandana Saniei, 2012).

For all Muslim establishments, the mosque is the most significant locality for the general statement of Islamic religiosity and public identity. A mosque is a physical appearance of the common attendance of Muslims and acts as a part of convergence

for the Islamic public. Islamic architecture has influenced from diverse architectural styles. Both modern and monumental mosques have constructed in the cities of the Islamic contraries adaptation from various cultures. Some special aspects have become particular to most mosques (Al-Tusi, 2008).

Islamic architecture has adopted the shapes of square, triangle and circle as the main architectural design and as such, a new sense of unification has evolved in Islamic architecture (Gaston Migeon, 2015).

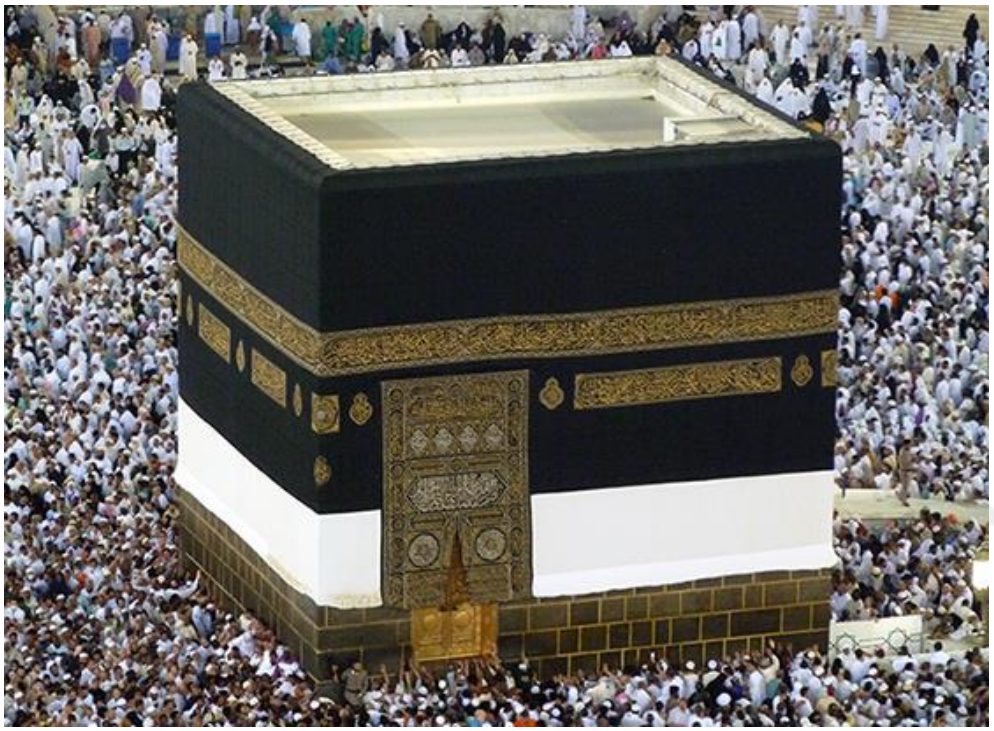

Figure 2.1. The Kaaba, pre-Islamic monument, rededicated by Muhammad in 631-32 C.E. Masjid el Haram, 2010 https://*www.khanacademy.org*

The meaning of a mosque in Islamic countries is much more than a place for praying. The sociocultural meaning refers to the center of the city and the beginning or end of streets to guide people for praying. People from different religions have always built their sanctuaries in best locations and in most impressive places. They has been a need in order to lead people to prosperity and praying (Ürey, 2010).

2.2. HISTORY OF MOSQUE BUILDINGS IN THE WORLD

The mosque has played a major role in the world of Islam. It is a significant element of society and indicator of social and economic conditions. Mosques have an important effect on the architecture and construction of many countries. In Islamic societies, mosques also have been considered as an essential element for schools and educational settings (Maryam Khazaee, 2013).

The first Islamic mosque was built by Prophet Mohammed and his followers in Medina. Later it inspired other Islamic artists. Despite the fact that Islam does not agree with luxury and beauty, its simplicity has been repeated. Various patterns of construction indicate that one of the criteria of Islamic architecture is simplicity and plainness (Maryam Khazaee, 2013).

The Prophet Muhammad's home is thought to be the first mosque. This house, which was located in Medina in Saudi Arabia, was a generic 7th-century Arabian style house. It had a large courtyard restricted with lengthy rooms, which were supported by columns (Figure 2.2). This style of mosque came to be known as a hypostyle mosque, meaning “many columns.” Most mosques built in Arab lands illustrated this style for many centuries (Purfar, n.d.).

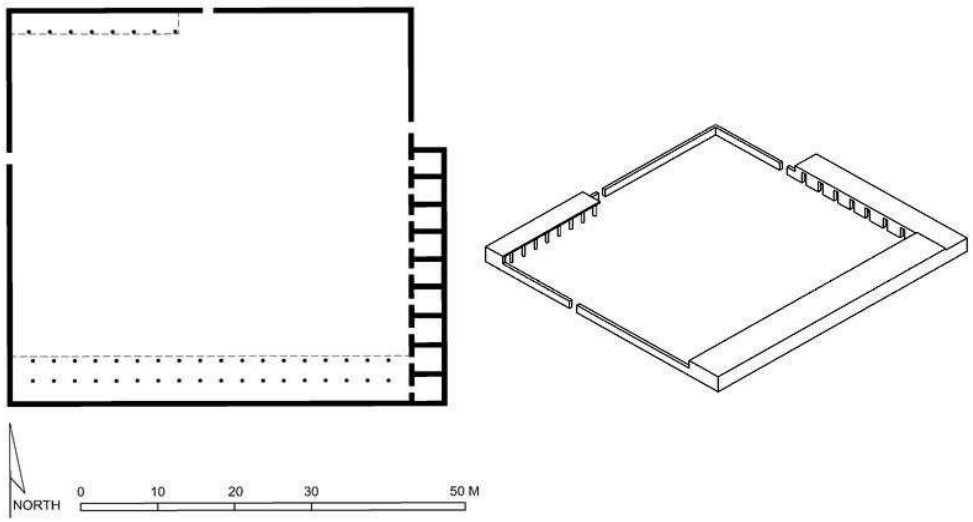

Figure 2.2. Reconstruction of the Prophet's House, Medina, Saudi Arabia.“Use of Traditional Elements in Contemporary Mosque Architecture in Turkey”, by Ö. Ürey, 2010, Master Thesis submitted to *METU.*

The mosque has always been the place of settlement of many disputes, as well as in holding various ceremonies. Craftsmen and artists have been trying to play a role in

the building of strong, beautiful and spiritual space with all their skills. In fact, the "mosque is a collection of different arts" that has created a space for worship. According to most of the researchers, the first mosque (Quba) was built during the prophecy of Muhammad with the guidance of God (Figure 2.2). This was one of the most important monuments of İslam (Macaulay, 2008).

Figure 2.3. Quba Mosque. "Architecture in the İslamic Civilization: Muslim Building or İslamic Architecture". A.Yassin, 2012, *Journal of Islamic Architecture, 2-2, p.54.*

Figure 2.4. Quba Mosque. (16 July 622 CE)Reprinted from "Impact of Modern Technologies on Islamic Architecture in Malaysia and Middle East". Toorabally et al., 2016, *Nova Journal of Engineering and Applied Sciences, 5-1.*

According to the oldest documents available in the book named Wafa al-vafi, its length was 36.3 meters and its width was 32.76 meters. Its area was about 1189 square meters. The mosque was completed with the management of Prophet Muhammad and in collaboration with Ansar and Imam Ali. This mosque was called Quba, had no roof, but only four walls and three gates. Since the Prophet in his travels to Sham city had seen churches and monasteries which were rectangular, decided to design the mosque in a rectangular shape too because in terms of engineering, the rectangle yielded the best plan (Hasanzadeh, 2013).

The mosques did not initially have minarets because the Prophet did not want to obey the construction method of churches. This was in order to prevent the criticisms of Christians and Jews. But when they ordered Bilal for Azan (the call), some people did not hear him and they were late for praying. Then they asked Bilal to climb on the roof of one of the adjacent houses. Later, Muslims built a split tower near mosques, a tower or a secluded minaret. To point out the direction of the Qibla (location of Quba in Makkah) in the prayer space, they deepened a part of the wall directed to Qibla and magnified it (Faris Ali Mustafa, 2013).

After the Saudi regime was delegated responsibility of the mosque to the Ministry of Haj Affairs, they constructed major renovations and added valuable structures to the essential design of Quba Mosque (Figure 2.4). Nowadays, Quba Mosque has lost most of its Islamic character and other facilities have become more important (Faris Ali Mustafa, 2013).

In the interior architecture of mosques, as Islam prohibited, there were no pictures of statues and the walls of the mosques and archways were decorated with poetry from the Quran. The architecture of a mosque is melded forcefully by the traditions of the era and region where it was constructed. As a result, style, layout, and decoration can change considerably. At the same time, because of the common use of a mosque as a place of gathering, specified architectural features are manifested in mosques all over the world (Holod et al., 1997).

Patterns were made from a variety of materials including wood, plaster, mosaics, stone, and ceramics. Islamic geometrical patterns are used in mosques as decorative elements during centuries. Geometric shapes are used to create these patterns and according to the researches using circle among the shapes has the symbolic meaning of unity in Islam (Abdullahi and Embi, 2012). Pattern design can vary regarding to

the era and region in which, the mosque was built. Much architectural knowledge has thus been hidden behind these patterns. Antiquarian designs go back to an arabesque style (Figure 2.4). They catch the form of a radiant lacing in which circle and star shapes are distinguished. These designs are both two, and three-dimensional (Hasanzadeh, 2013).

Figure 2.5 Arabesque. *Khatei and decorative designs*, by A.M. Takestani, 2002, Tehran: Soroush Press.

Even though the architecture of a mosque is mostly dependent on regional traditions, plans, styles and decorations can differ greatly. The secondary function of a mosque is to create a congregational praying space. This effected the architectural aspects of mosque all over the world. All mosques are accentuated by domes, pyramids, or noticeable roof and contain minarets and courtyards in order to accommodate crowds (Behreman, 2012).

Each district of the Islamic world combines the same characteristics to represent a native architecture in which vernacular and historic traditions are appeared. Architecturally, the mosque may be classified into six main types corresponding to historical and territorial development. (Figure 2.6) (Hoteit, 2015).

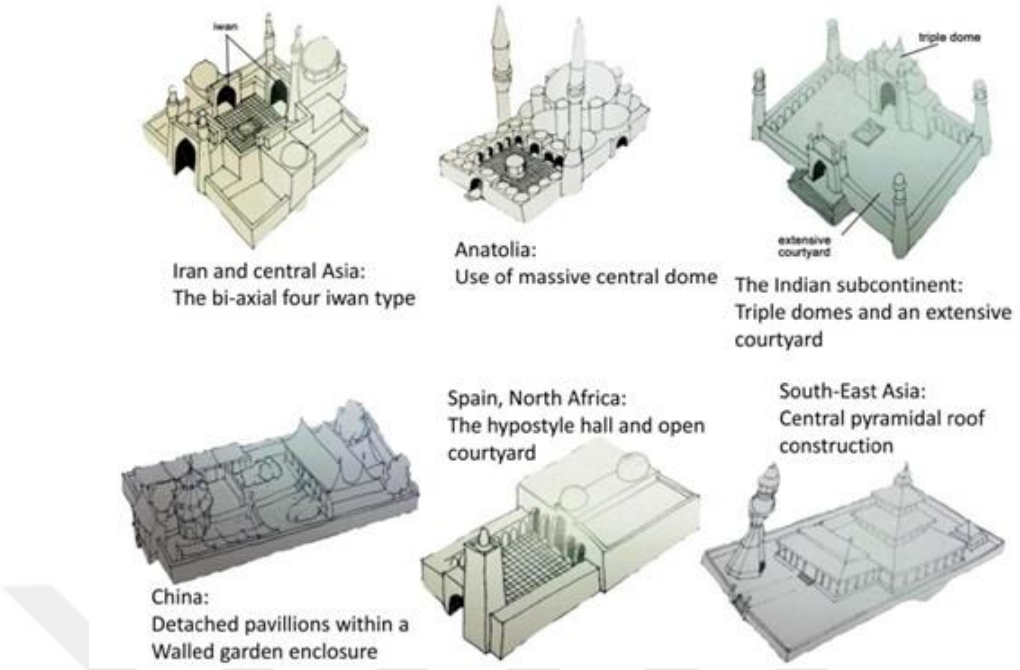

Figure 2.6. Typology of Islamic Mosque architecture in world. Reprinted from *Shahrilkhairi*, by S. Khairi, 2017, www.shahrilhairi.com.

All of the people in the world have their own nationality and cultures .after immigrants arrive in various countries, often preserve most of their usual traditions and opinion, which may limit from their language, connection, and lifestyle until religion.During the 1950s and 1960s, lots of the Muslims started to migrate from several countries and the wide majority of them moved to England, France, and other parts of Europe as well as North America. About other Muslim migrants to Europe came from Middle East-North Africa, and more than five million came from the Palestinian. simultaneously, nearly half of Muslim migrants achieve from the Asia-pacific region. The mosque is one of the visual statements of universal Muslim religious personality in non-Muslim version (Figure 2.7). The considerable numeral of countries has so many various architectural methods of their Islamic construction (Farrag, 2017).

Figure 2.7. The influence of Iranian Muslim immigrants on architecture of Imam Ali mosque, Germany *http://www.deutsche-islam-konferenze.de*

Generally typology of Islamic Mosque architecture in the world separate to six regions: Iran and Central Asia, South-East Asia, China, Spain- North Africa, Anatolia, Indian (Farrag, 2017).

South-East Asia: In this area mosques were constructed abroad the Arabian Peninsula as a result of Muslims migration to this place. Egypt as an Asian country was occupied by Muslim Arabs, and since then so many mosques were manifested all over the country as its capital city, Cairo, has procured the nickname of thousand minarets. Egyptian mosques have been modified to Islamic schools (madrassas), hospitals or tombs (Holod, 1997). These places can be differentiating by their central pyramidal roof construction. (Figure2.8).

Figure 2.8 Kudus Mosque, 1537 (partially rebuilt 1918), Central Java. (Photography by Imran bin Tajudeen)

China: In Chinese mosque architecture, the elements of the mosque are adapted to local architecture. The main praying area of the mosque is a rectangular shaped space. The first Chinese mosque was constructed in Xi'an (Figure2.9). The main building of the Great Mosque of Xi'an, which dates back to the eighteenth century, does not display the appearance of traditional mosques. Mosques in western China illustrate the combination of many architectural characters which are seen in mosques around the world. Western Chinese mosques presumably were made of minarets and domes while eastern Chinese mosques looked like pagodas[1]. The main characteristic of this type is detached pavilions within a garden enclosure (Hoteit, 2015).

[1] Pagodas: Pagodas is a tiered tower with eaves usually found in China and Nepal

Figure 2.9. Great Mosque of Xi'an minaret, 24 October 2007.
https://commons.wikimedia.org

Spain- North Africa: A various hypostyle earth traditional construction is found in Northern Africa, particularly in Sudan, and was distributed by Muslim Arab merchant athwart the African mainland to the western sub-Saharan area. Mosques combine older African symbols, such as progenitor[2] column productivity symbols and tops covered in ostrich eggs for stability. It is a habitat tradition, which makes these mosques hard to date. Although the former mosque is older the present building of the Great Mosque Djenne in Mali (Figure2.10) was built in 1909. In a recently built mosque in Yaama (1962–1982), Niger, used the same architectural language and became to be endless (Steele, 1996). One of the most important examples of this type is, Great Mosque of Cordoba in Spain (Figure 2.10).

[2] Progenitor: Distant ancestor, forefather

Figure 2.10 Great Mosque of Djenne, Mali, 1907 (Photography by Mark Abel) *http://www.slate.com/blogs/atlas_obscura*

Figure 2.11. Great Mosque of Cordoba, Spain. "Contemporary Architectural Trends and Their Impact on the Symbolic and Spiritual Function of the Mosque", by A. Hoteit, 2015, *International Journal of Current Research, 7(3), 13548.*

Iran and Central Asia: The mosque with four iwans, which is seen mainly in Iran, Central Asia, and Afghanistan, was expanded from the vernacular Iranian buildings

which were used as houses, madrasahs, and caravansaries. In Iran, the traditional arch-and-dome building was applied to extend iwans, or arched open porches, embraced by a giant portal (pishtaq) regular around a central courtyard (Frishman, 1994).

It was the preface of ‘Iwan’, an architectural heritage of the pre-Islamic Sassanid Dynasty, into the architectural composition of mosques by Persians that bring about an historical expansion in the history of mosque architecture (Figure2.12). In primary times builders made the central range of the arcades of worship salon front courtyards rather wide and higher than the others, underline the central nave towards the Mihrab .The iwan during the Sassanid era had the function of a throne or an audience hall, functions not needed in a mosque, the form was accepted with the intent of formatively glorifying the mosques (Kamiya, CLASSIFICATION and TYPES of, 2006).

Figure 2.12. Friday Mosque, Isfahan (dome) *the Seljuks: Iran and central Asia, C.1040-1250,* Iran (1086-1087) (Photography by Hans Munk Hansen)

The local tile-making material was transferred from China to construct the blue-and-white ceramics to encompass the significant entrance portals and the miḥrab (Frishman, 1994).

Anatolia: Mosques first were constructed in the Ottoman Empire (mostly present-day Turkey) when many Turks in the area started to transform to Islam. Unlike the

first mosques in the Ottoman Empire like the Hagia Sophia in Istanbul, churches or cathedrals were built in Byzantine Empire. Unlike the first mosques in the Ottoman Empire like the Hagia Sophia in Istanbul, churches or cathedrals were built in Byzantine Empire. Ottomans constructed their own projects and designs of mosques, with large central domes, numerous minarets, and open façades. The Ottoman method of mosques generally included elaborate columns, corridors, and high roof in the interior, while combining traditional elements, such as the mihrab. Central and massive dome is one of the outstanding characteristics of this type. The most important features of this type are huge domes and pen-shaped minarets as in Süleymaniye Mosque (Figure 2.13), that was built by architect Sinan in Istanbul in 1557 (Hoteit,2015).

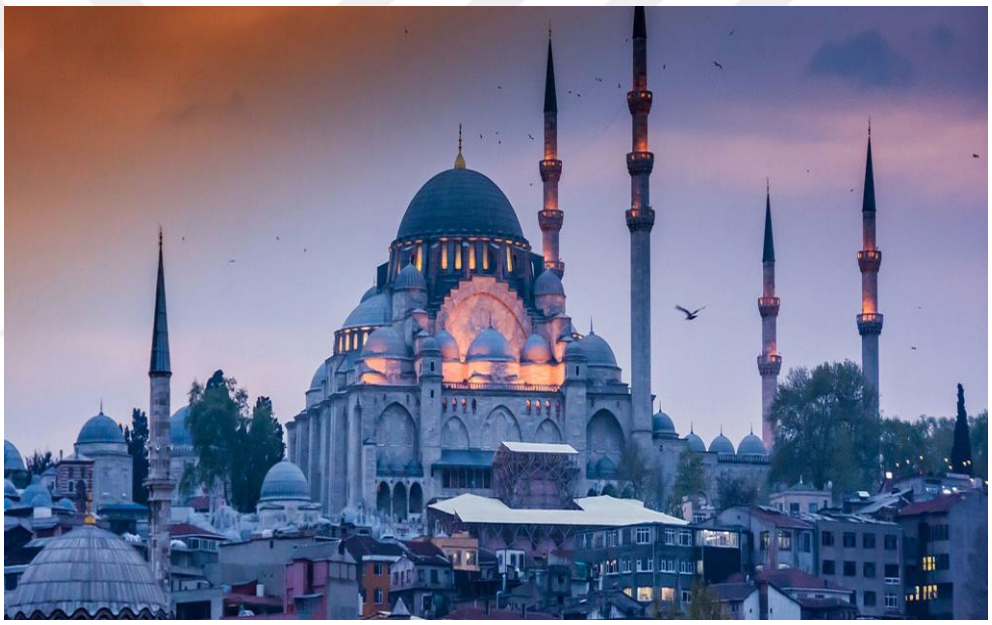

Figure 2.13. Mosque of Süleymaniye, Turkey. "Contemporary Architectural Trends and Their Impact on the Symbolic and Spiritual Function of the Mosque", by A. Hoteit, 2015, *International Journal of Current Research, 7(3), 13548.*

Indian: With the influx of Muslims in India, the merger of regional and immigrated technologies evolved a newer architectural style. The assimilation of two different architectural approaches also affected the structure of houses of worship for the new religion in the country. Notwithstanding several uncommon structures in the beginning of their rule, the particular interest of rulers and their eclectic approach refined the architecture of the mosques up to the highest levels of aesthetics. With the

tendency of Muslim rule in India, the design of the mosques became an architectural statment of popular people (Ali, 2012).

In the Indian style, mosque totally expanded by the Imperial Moguls (1526–1828). It is specified by a broad rectangular prayer hall covered with threefold dome, a courtyard with a pool of water restricted by colonnades, and a fathomless entrance. The Indian mosques were modelled on the foundation of Iranian four Iwan type with centralized courtyard and onion shaped domes. Building's material in the Indo-Pakistani subcontinent was mainly brick. The structural techniques and decorative design composed the Persian and Hindu traditions (Ali, 2012).

Figure 2.14. Niujie Mosque, China. From "Contemporary Architectural Trends and Their Impact on the Symbolic and Spiritual Function of the Mosque", by A. Hoteit, 2015, *International Journal of Current Research, 7(3), 13548.*

2.3. TYPOLOGY OF MOSQUE BUILDINGS IN IRAN

Mosques in different parts of the world are architecturally similar to each other. However, in each region; it also embraces the architectural and artistic features of the area and thus shows differences with other mosques. Besides that, each country's mosques reveal the characteristics of its native architecture (javadi, 1984).

Mosques are the most important monuments of Iran after Islam. Prominent and advanced buildings in each era of Iranian architecture after the arrival of Islam are

found in mosques. Hence, even in remote parts of Iran, mosques were prominent buildings built at the expense of the people (javadi, 1984).

Table 2.1 Iranian architecture before, after and during Islam (678bc-1736)

Period	**Date**	**Style**	**Properties**	**Mosque and building as example**
Median Empire Scythian Kingdom Achaemenid Empire Seleucid Empire	678-550 BC 652-625 BC 550-330 BC 312-63 BC	The Parsian	Central location of building in the square plan. Use of Columns for support the ceiling and construction of columned halls. Use of Minarets: They were constructed at least from the time of Achaemenians in ancient Persia to be used as light houses in the deserts or watch towers at the country borders. Dome ceiling structure system with column and beam Use of Arches in entrances and gateways Use of stone, wood and cloth in interior design of buildings.	- Darius' Palace at Susa - Persepolis in Fars province - Pasargad in Fars province - Naqshe Rostam Fars province
Parthian Empire Sassanid Empire	247 BCE - 224 AD 224-651 AD	The Parthian	In There are no corridors in the buildings. The rooms for the most part open one into the other. Use of high and small round arches and semi-circular arches. Dome arches is the typical form of ceiling The domes are circular at their base; but a section of them would exhibit a half ellipse Use of series of tall narrow doubly recessed arches as ornamentation. Use of local material such as wood. Use of stucco wall and brick decoration. ternal courtyard.	- Ghal'eh Dokhtar(The Maiden Castle) in Firozabad - Anahita Temple in Kangavar - Sarvestan city in fars - Kasra vault in Tisphon - Bishapur city in Ilam - the Palace of Ardashir in Firouzabad
the late 7th century to 10th century		Khorasani Style	Rectangular plan. - Plan with four porches. - Square shaped porches. - Use of couple minaret. - Chevron vaults. - Construction of dome and its paraphernalia . - Use of ornamentations such as tore,	- Fahraj Mosque in fahraj(yazd) - Damghan Mosque in damghan - Isfahan Mosque in ısfahan -Ardestan Jame Mosque in ardestan(yazd) - Naeen Neyriz in naeen - Bam arg in kerman

			brickwork, adobe tiles. Use of brick as basic masonry . - Multi-functional complexes (Caravansary (type of public house), Madrasseh, Mosque)	
Samanid period Seljuq period	875 – 999 1037-1194	Razi Style	- Rectangular plan. - Plan with four porches. - Square shaped porches. - Use of couple minaret. - Construction of dome and its paraphernalia . - Use of ornamentations such as tore, brickwork, adobe tiles. Use of brick as basic masonry . - Multi-functional complexes (Caravansary (type of public house), Madrasseh, Mosque)	- Qaboos dome in gorgan - Zavareh Mosque in zavare -Ardestan Mosque (added) in ardestan - Red Dome Maragheh - Rabat Sharaf in sarakhs - Towers Kharaqan and Amir Ismail - Samani mausoleum in Bukhara
Ilkhanid dynasty Teymourid era	1256-1335 1370-1450	Azari Style	- Porches with rectangular plan. - Diversity in constructing porches. - Use of ornamentations such as tore, golden tiling, embossed tiles. - Use of pharynx between the dome space and the space below. - Creating ragged surfaces all over the building. Construction of massive complexes.(Mosques)	- Soltanieh Dome in zanjan - Ali Shah arg in Tabriz - Varamin Mosque in varamin - Yazd Mosque in yazd - Gohar Shad Mosque in mashhad - Yazd Myrchaqmaq in yazd - Ms. Bibi Mosque in samarghand - Blue Mosque in Tabriz
Safavid	1501-1736	Esfahani Style	-Rectangular plan - Mosques were located in the center of cities. -Porches -Ornamentations such as: adobe tiles, Seven colors tile (Haftrang), Mogharnas, Yazdi bandi. -High-grade and lasting construction materials	- Imam Mosque in Isfahan - Sheikh Lotfollah mosque in Isfahan - Khan Shiraz school in shiraz - Ganjalykhan complex in Kerman - “Chehelsotun” mansion in Isfahan - “Eight heaven” mansion in Isfahan - “Chahar Bagh” School in Isfahan

With a glimpse to Iranian history, one can generally classify mosques into three groups:

- **Shabestani (Khorasani) mosques**
- **Four arched mosques**
- **Porch mosques**

2.3.1. Shabestani Mosques

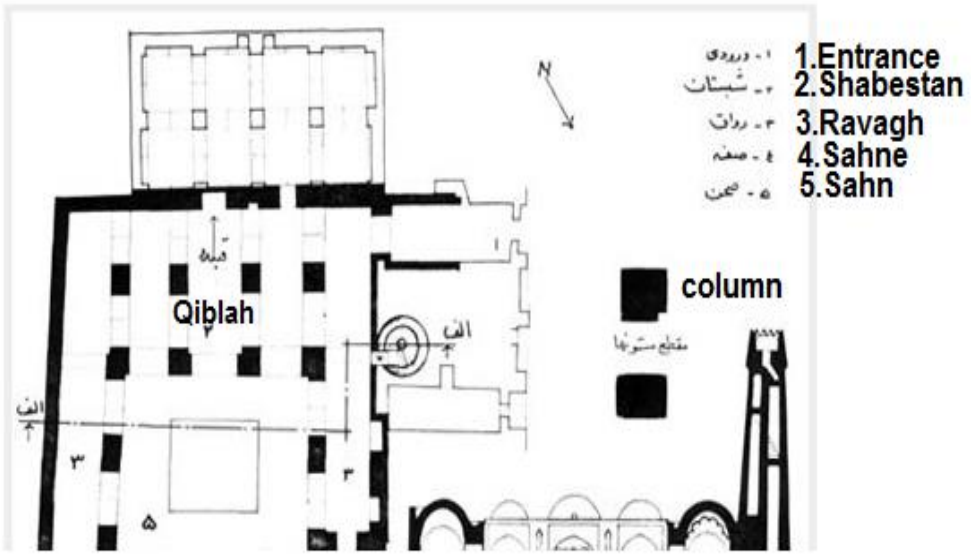

Figure 2.15. *Plans for Shabestani Mosques.* Farspage, *2017, www.farspage.com.*

In Iran, the first examples of art and architecture were formed in Khorasan. In this area, first mosque formation of the Iranian architecture after Islam can be seen. Thus, "Khorasan" or "Shabestani" style began to develop in the first century AD, from the beginning of the Islam acceptance by the Persians, until the nineteenth century when "Albuya[3]" and "Deylam[4]" styles continued. In this way, Islam inspired the map of mosques which were built as "Shabestani" or "Forty Columns". In general, this mosque architecture is very simple and free of any kind of objects, and the materials used in these buildings are simple and inexpensive (Javadi, 1984).

Persian's pre-Islamic architecture, in the vision of the remaining function, is obvious in lots of structures. The attitude into a high roof and multiple columns engraving on stone walls are across the Property of antique Iranian architecture. Other characteristics of this architecture are as well as "Four Gardens" and square-shaped structures. The culture of this period is educative and didactic evolution that often occurs in Khorasan. Through here, Islamic architecture found its direction to further location in Iran. In this style, construction magnificent and massive structures ended and even simpler structure has emerged (SHAINSTYLE, 2013).

[3] Albuya: was one of the original Iranian-Shiite clerics living in the Deylaman region of Iran.The architectural features of this era are similar to Sasanian architecture (pre-Islamic). https://fa.wikibooks.org

[4] Deylam: This period follows the Albuya period.

The examples of this style are "Mosque of Fahraj Yazd", "Damghan Historical Mosque", "Naiin Mosque", "Tabriz Grand Mosque"(Figure 2.16), "The First Building of the Great Mosque of Isfahan" and "Tomb of Amir Ismail Samani".

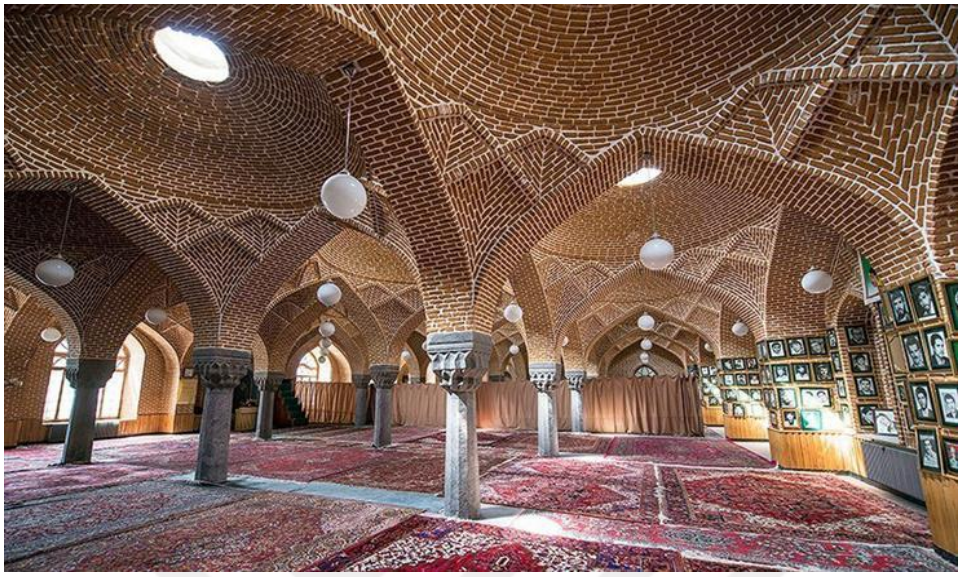

Figure 2.16. *Interior of Tabriz Grand Mosque. Jamnews 2017, www.jamnews.com.*

Figure 2.17. Tabriz Grand Mosque. Entrance of Jameh Mosque in Tabriz, 2017, www.trekearth.com.

Generally, mosques have an enclosed section on the side of the Qibla and include a central courtyard at its front and the surrounding footage (Ladan Asadi, 2015). In the

4th century AD, the column was eliminate, the domes and fire temples converted mosque architecture from Shabestani to Iwani (Figure 2.18).

Figure 2.18. Tabriz Grand Mosque, Iwani mosque. "Central Courtyard in Traditional Mosques of Iran", by V. Makani, 2015, *Journal of Social Sciences*, 6(6), 357.

2.3.2. Four Arched Mosques:

The mosque has a square form with four columns and between them, there is a circular dome connecting the four arches, which provide a unique role for the mosque (Mousavi, 2013).

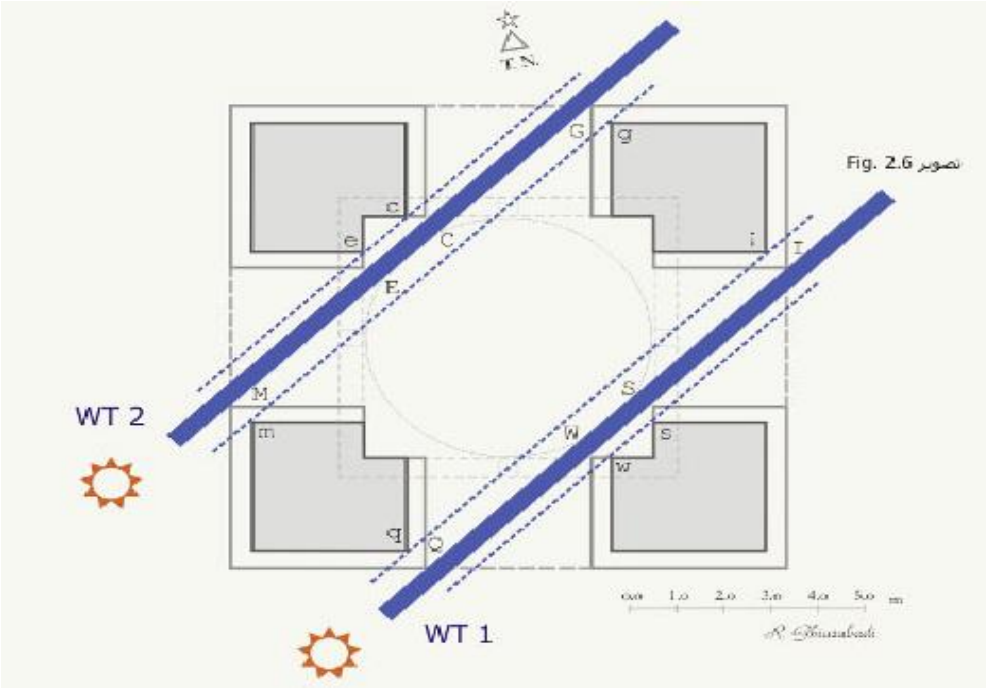

Figure 2.19. Plan of the four vaulted mosques. *Farspage*, 2017, www.farspage.com.

In the first half of the 5th century AD, with the establishment of the Seljuk dynasty, the brightest era of Islamic art began in Iran. In this period, the culmination of an architectural method called "Razi"[5] is observed. It began from the time of the Al Ziyar dynasty (from 927 to 935) in Rey city and continued until the "Mongol" attacks (1247-1318). At this time, the tomb towers, minarets, mosques, schools, caravans, and many other building were constructed. During this period, the number of towers and minarets increased simultaneously (Mahi, 2017).

Architects used brick and tile types of "broken" and "knotting" forms. In this style, the building from the foundation was constructed by "high quality materials". They were erected with small, large and thin melded bricks. Famous mosques such as the Persian Mosque near Isfahan, the Ardestan Mosque, the Qazvin Grand Mosque and the Isfahan Mosque (Figure 2.20) are examples of this fashion (Mahi, 2017).

[5] Razi: The "Razi style" is a style of architecture when categorizing Iranian architecture development in history.Examples of this style are Tomb of Isma'il of Samanid, Gonbad-e Qabus, Kharaqan towers.

Figure 2.20. Isfahan Mosque First Entrance. “A Comperative Study of Isfahan Grand Mosque and Hakim Mosque”, by H.Irevani et. al, 2015, *Buletin Teknologu Tanaman, 12(2).*

Figure 2.21. Isfahan Mosque Second Entrance. “A Comperative Study of Isfahan Grand Mosque and Hakim Mosque”, by H.Irevani et. al, 2015, *Buletin Teknologu Tanaman, 12*(2).

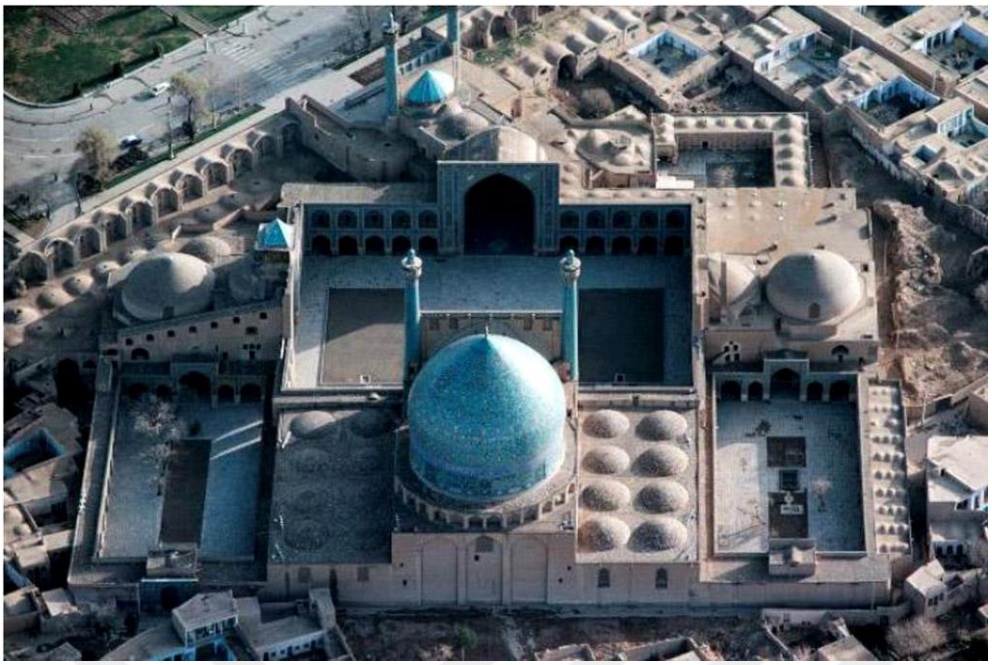

Figure 2.21. Ornaments of Isfahan Mosque. “A Comperative Study of Isfahan Grand Mosque and Hakim Mosque”, by H.Irevani et. al, 2015, *Buletin Teknologu Tanaman, 12(2).*

2.3.3. Porch mosques:

Many experts believe that Eastern Iran, especially Khorasan, is the location of porches. They have large porches from the Parthian period (247 BC‑AD 224) and their territory was in Eastern Iran. The first Islamic era porches were formed in the south. Then the symmetrical North Portico in the direction of the south porch was built and partly used in sunny winters. One of the uses of the south porch was to protect people from the summer heat because the south porch was located behind the sun and creates shade. Worshipers use the north and south porches according to the season (Mohammadi, 2015).

In the middle of the eighth century AD, with the attack of Timur, once again, the cities of Iran were devastated; however, these attacks also defeated the Iranian art of the Timurid. The cities of Samarkand and Bukhara became Iranian art centres. Of the famous monuments of the Ilkhani and Timurid times, one can mention the "Goharshad Mosque", "Mosque of Varamin", "a large part of the holy shrine buildings of Hazrat Reza", "Tabriz Blue Mosque “(Figure 2.24) and "Yazd Mosque". With the Safavids' influence in the early 10th century AD, cities such as Tabriz, Qazvin and Isfahan became Iranian art centers (Mohammadi, 2015).

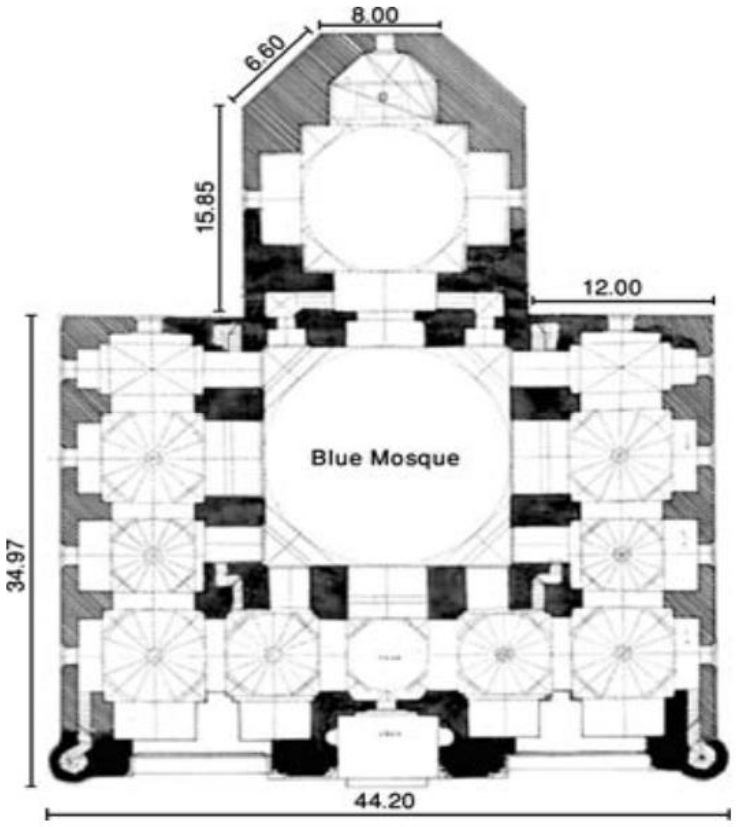

Figure 2.22. Plan of Tabriz Blue Mosque. "Seismic Behaviour of the Blue Mosque of Tebriz", by S.Eshghi, 2008, *14st World Conference on Earthquake Engineering.*

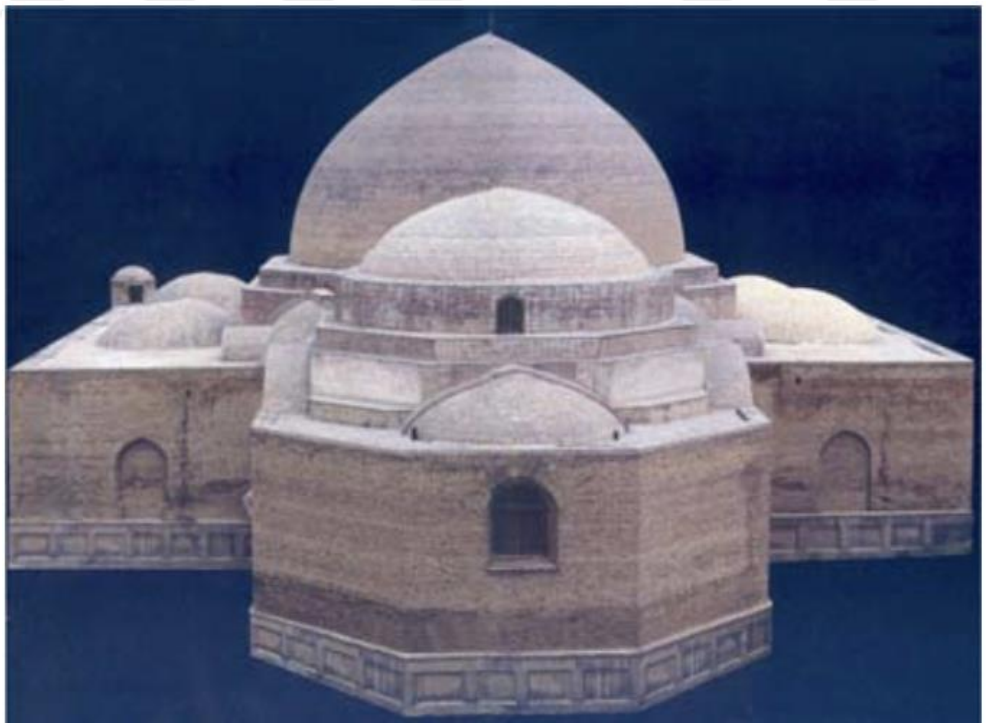

Figure 2.23. Tabriz Blue Mosque. (1351-1469), "Seismic Behaviour of the Blue Mosque of Tebriz", by S.Eshghi, 2008, *14st World Conference on Earthquake Engineering.*

Figure 2.24. Tabriz Blue Mosque (1351-1469), Entrance, 14st *World Conference on Earthquake Engineering.* (Photography by Saide Khali Safa)

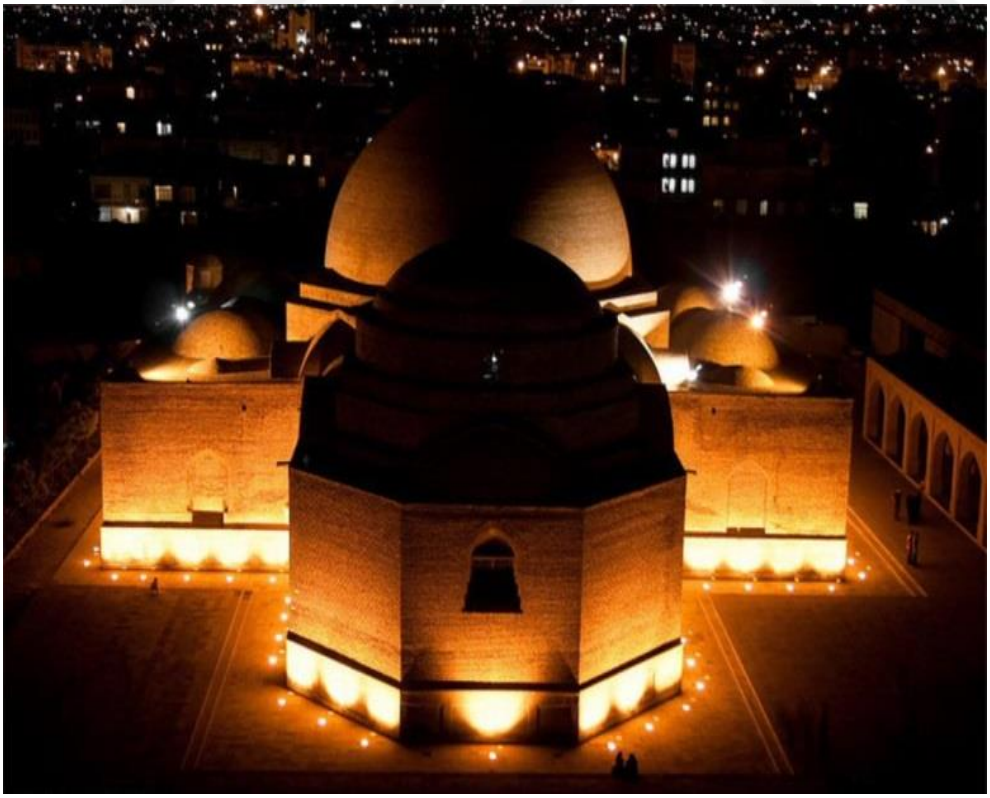

Figure 2.25. Tabriz Blue Mosque, Dome (1351-1469), *14st World Conference on Earthquake Engineering.* (Photography by Saide Khali Safa)

Figure 2.26. Interior of Tabriz Blue Mosque, (1351-1469), *14st World Conference on Earthquake Engineering. (*Photography by Saide Khali Safa)

2.4. INTERIOR CHARACTERISTICS OF IRANIAN MOSQUES

Religious places and mosques have played a decisive role in promoting culture, politics, science, and civilizations. Besides that, religious buildings have always been the subject of attention, respect for nations and tribes. For this reason, the complete experience of the outstanding artists in every historical period has served architecture and decorated the designs which were used in the construction of such places (Fagih, 2014).

Each type of building has its own design and architecture. The mosque is no exception to this law. But, all the mosques also have common elements. Adding a dome to the shabestan atmosphere, the Iranian mosque, with the help of a step-by-step geometry and the creation of the porch increased its glory. They have unique features that include the elegance and delicacy of decorating the body inside and outside the building. The crystallization of this matter can be clearly seen in the beautiful and elegant small building such as the Sheikh Lotfollah Mosque in Isfahan (Figure2.28 and Figure2.29). It has an incredible beauty, scientific perception, and mastery (Faris etal. 2013).

Iran, as an Islamic country, has diverse the mosques in different cities which are all designed in a way to have a specific light-oriented structure. For this aim, using different openings and pore around the mosques' domes or in the prayer-halls' walls,

due to the gnostic and structural objectives, is very Common. Based on the principles of Iranian architecture, an opening is a valve embedded in the wall or ceiling for allowing the air or the light. Therefore, for leading up to natural ventilation and lighting of the interior, each opening has two considerable functions that including increased sunlight and air influence to the interior (Jooshesh, 2012).

Color is achievable per the light reinforcement and it indicates a plurality that has an intrinsic relationship with unity. White is the symbol of absolute being, holy, sincerity, and quietness, which can be observed in the interior design of the mosque. Azure Pictured the region within and the greatness of the sky, turquoise is the symbol of respect and yellow as the brightest color illustrate brightness and light which are a symbol of insight and comprehending. Green with the combination of yellow and blue color is an indication of peace and hope and it is an admixture of knowledge and belief. Another one is black, which reinforcement covers Kaaba is and it is the primitive symbol of God (Jooshesh, 2012).

Water is the foundation of life and it cleans anythings dirty. Water in a mosque is not only used for cleansing of eremites, but also it reduces the rigidity of the structure. Water achromatic summons man toward discoloration and unpretentiousness and its fluidness accentuates the frailty of the edifices that human beings construct for their eternity. A different application of water in the mosque is to reflect the image of the building in itself, which creates a mirror for the observer (Jooshesh, 2012).

Mosques usually follow a similar pattern and include common elements such as bedchamber, dome, cloister, courtyard, portico and the altar, which are constructed in the direction of Qiblah (Kaaba) in Mecca. The altar is analogized to a rainbow and the arched porch is analogized to a mountain, which reflect nature. Different parts of mosques are following: Lighthouse or minarets with the meaning of focus of light, is one component of the mosque that were made in the past as a guide for pedestrians lost in the desert and awakening of the sleeping souls. However, the minaret is an expression of divine guidance and direction. Dome with the regular division, the basis of which is a circle and is an image of an infinite whole, to regular polygons, one can discern smaller stars resembling polygons (Garmroudi, July 2013).

Another interior characteristic in the mosque is a pool in that located in the center of the courtyard, which has flowing water. Therefore, this mirror makes possible the visit of the sky and the earth. Myansra or apron which is the central courtyard

features Islamic architecture and it is considered to be the resting place for travelers and a cleansing spot that is usually rectangular, square or polygonal (Jooshesh, 2012).

The cloister, which has been popular since the Parthian period, consists of an arch and is opened and closed to apron from three sides. This element has input and output spaces, which prevents sunshine and causes the airflow, it is decorated with Muqarnas, and brickwork, stucco and tile work. The cloister is referred to the columned indoors existing around the apron. The columned bedchambers have low height and are located around the dome. The altar, which is usually located on the south sidewall of the mosque concerning the direction of qiblah, is hollow or sunken into a part of the wall (Jooshesh, 2012).

Will Durant, one of the famous American historian, has interesting descriptions of this unique performance

Most parts of the mosque have an amazing beauty that includes arabesque motifs, geometric shapes and core design, which is complete and uniform (Javadi, 1984).

Figure 2.27. Sheikh Lotfollah Mosque of Isfahan. "Studying Relationship Between Application of Light and Iranian Pattern of Thoughts", by A.Javani, 2010, *1st International Congress on Color and Light in Architecture, 39.*

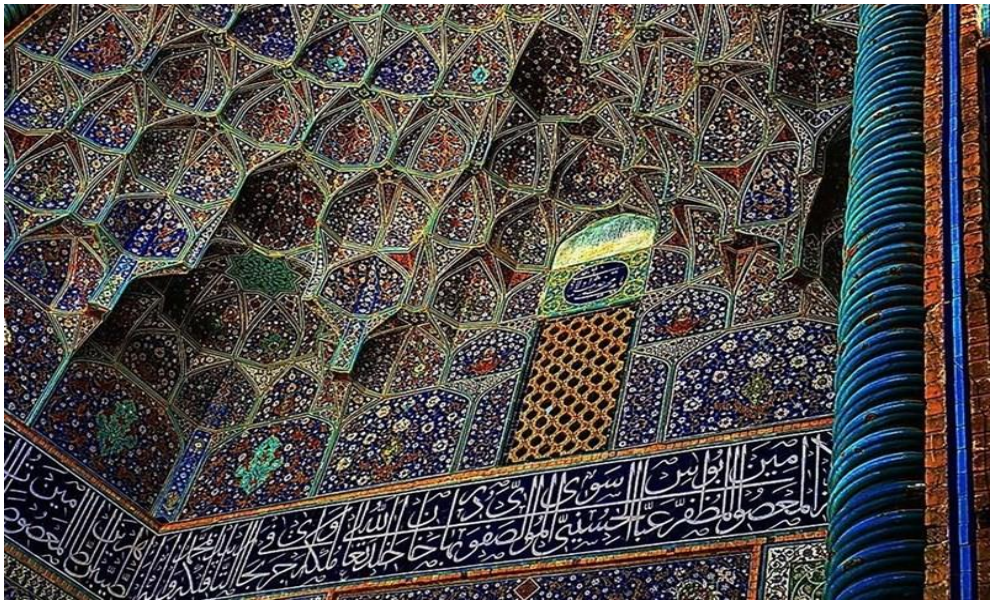

Figure 2.28. Interior of Sheikh Lotfollah Mosque of Isfahan. "Studying Relationship between Application of Light and Iranian Pattern of Thoughts", by A.Javani, 2010, *1st International Congress on Color and Light in Architecture, 39.*

Professor Pope, a renowned Iranian scholar writes in his book, The Review of Iranian Art, that

> "*The smallest fault is not seen in this building. The sizes are very suitable, the map is very strong and beautiful, and in summary it is an agreement between a world of passion and a great silence and tranquillity that represents the rich taste of aesthetics and cannot be a source of religious beliefs or heavenly inspiration*" (Tabar, 2014).

2.5. MATERIALS USED IN MOSQUE BUILDINGS

The decorative arts in Islam are symbolic that has been applied to a broad choice of materials. Each of these elements has a craft-based nature of its own. The history of the materials can often be a chase a back to pre-Islamic times. In Muslim architecture, any surface may be considered qualified for elaborate decoration. This is exclusively the exterior view in religious architecture. Nevertheless, this point extends out to ceramics, textiles, metalwork, woodwork, and many other forms of art (Wade, 2006).

Walls were decorated with carving, mural painting, and other decorating. In general, floors and walls usually covered with mosaics, large in scale and rich in color.

Generally, plasterworks were mounded more than engraved. Accordingly, motifs were constructed as repeated and extended ones. Materials used in the mosque buildings of the Islamic period are diverse. The purpose of the description of traditional materials is first to become intimate with the culture and history of these materials, which were used effectively. Mosaic works with monochrome tiles became commonly used in Iranian architecture (Wade, 2006).

These materials are:

Clay, brick, lime, plaster, stone, wood, soil, sand, mortar, paint and glass (Wade, 2006).

Clay:

One of the most common materials in Iran's mosque architecture is clay. In the Islamic period a part of the wall in all buildings were built from clay and the rest was bricks. Because of its low resistance to natural factors, there is no more clay in mosque examples (Javadi, 1984).

Figure 2.29. Traditional (Clay or Indigenous) Architecture, The Jama Mosque of Isfahan in Iran/ Main Features Source: A Visual Journey To *Main Features of The Traditional Architecture in Historic Cities of Iran*

Brick:

The most important building materials in Iran, before and after of Islam, were bricks. These bricks used in building decoration were usually square and from the beginning of Islam until the Timurid period, most of the buildings were decorated with the art of brickwork. Isfahan Jamea Mosque, Ardestan Jami Mosque, Kabir Mosque in Yazd are examples of bricks works in different historical periods (Behreman, 2012).

Figure 2.30. The Jameh mosque of Kashan, *the oldest historical structure in Kashan, Iran. Only brick minaret is located in its southeastern corner. https://commons.wikimedia.org*

-Lime:

Lime is widely distributed throughout Mesopotamia, where it was used from a very early date for artefact and the mosque because it can bedressed to a fine finish. It also had significant secondary uses for mortar and plaster as well as contributing to the lime content in clays employed. The walls of the Iranian mosque were built with a rubble stone core enclosed by a facing of stone or brick and stone. In general, the strength of mortar depends on the climate, location, environment and type of building. Today, lime is one of the most useful materials in constructing buildings (Behreman, 2012).

Figure 2.31. A view of Masjed-e Agha Bozorg, 19th-century mosque in Kashan, *http://irannewsdaily.com*

Plaster:

The plaster is another useful material that has been used in Iranian architecture during all ages. Due to cheapness and stiffness, it had many applications. In the Sasanian period, plaster mortar was used extensively in the construction of project. Mortar has been an integral part of the construction industry since ancient times. In many of the remains of past and in the Islamic and Iranian mosque, plaster has been used to smooth surfaces, as well as to write inscriptions or decorate mosques and altars (Sanjag, 2016).

Figure 2.32. Isfahan Jame Mosque*(Oljaito Sanctuary)*, Muhammad Savi in 710 AH, https://commons.wikimedia.org

Stone:

In Islamic architecture, stone has been used in the foundation of mosque structure, and in their decoration. The use of rocks has a special importance, and various types of stones were used in inscriptions; stone was cut or sculpted in Iranian mosque architecture. The utilization of stones in ancient times was more common than bricks (Figure 2.32). The use of transparent marble as a glass in winter nurseries can be seen in Vakil Mosque of Shiraz (Sanjag, 2016).

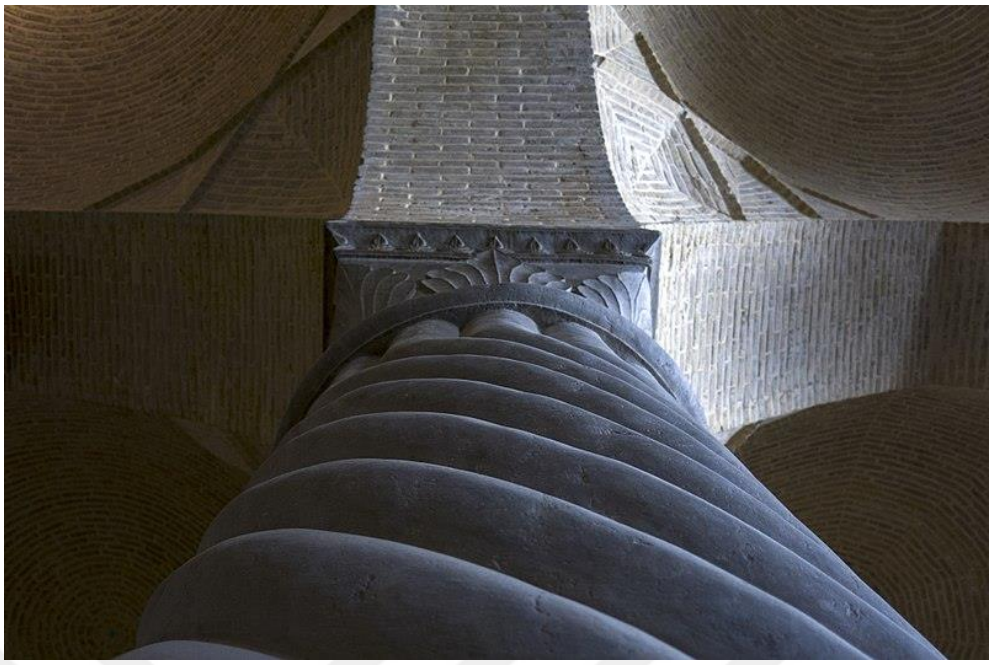

Figure 2.33. Vakil Mosque in Shiraz. Stone column, 12th century A.H. Pinterest, 2017

Wood:

Traditionally, it was used for doors windows and shutters. However, the finest work is generally found on pulpits (minbar). This is the key segment of furniture in a mosque from which Friday sermons are read. Generally, after stone, gypsum and lime, wood is also very effective in construction and structure. There are examples such as Imam Zadeh Saleh Manafi in Tabriz, Jameh mosque in Yazd (2.33) and the Arg Alishah in Tabriz (Mousavi, 2013).

Figure 2.34. *Traditional Iranian ornament on wooden door* of Jameh mosque in Yazd, 14th century, (photography by Aliaksandr Mazurkevich)

Sand:

Sand is a material, which is used in combination with lime, to form a mortar to be used with bricks and other works in mosque construction. Not only used in its natural form but also sometimes artificially obtained by crushing granite stones dense limestone and other rocks. The sand and stone were used in the body, facade, floor, and sometimes in walls in Iranian mosque architecture. In addition, this material has different types that are ultimately based on the appearance, color and categorized into different categories (Mousavi, 2013).

Mortar:

In the evolution of building techniques, especially in the construction of vertical structures, and it vaulted structures, mortar have always played an important role in allowing complex structures to be formed. Either lime or gypsum mortar was used, depending on the required degree of permanence or the necessity for special conservation in Iranian architecture, as in bridge piers or canal walls, which were subject to the continuous action of water. Important differences can be observed in the stability of the mortar used in the piers and in the vaulted portions of the mosque or bridge. In order to articulate the otherwise monotonous wall surface, in early

Islamic architecture mortar-filled vertical joints were made thicker than the horizontal joints (Mousavi, 2013).

Paint:

Colors and paints avail to make the building beautiful. In the prehistoric times and the fourth and third millennia, colors were used to decorate and natural paintings, as well as walls of the building. Traces of color remaining on some mosque architectural elements suggest that certain parts of buildings were at least partially painted. Red marks were also used as an aid in joining different building elements in the palaces at Pasargadae and as guidelines for squaring and smoothing the building blocks (Mousavi, 2013).

Glass:

Glass is one of the important materials that has been featured in Iranian architecture in windows of many palaces and mosques. The alongside colored glass is a part of the Iranian special decoration of the domes and shabestan. Glass was use in red, blue, purple and green colors to provide lighting and decoration in the windows and domes of the mosque and nests. Glass was used extensively, such as the Ali Qapu of Isfahan, a magnificent symbol of Islamic architecture and an exhibition of Islamic art (Figure 2.36) (badgir.info, 2013).

Figure 2.35. Glass use in Ali Qapu of Isfahan. Pinterest, 2017, retrieved from www.pinterest.co.uk.

2.6. ARCHITECTURAL ELEMENTS OF IRANIAN MOSQUES

The Persians had a rich architectural inheritance from the earlier Persian dynasties, and they began to combine elements from earlier Parthian and Sassanid designs into their mosques, in order to impress people by buildings such as the Palace of Ardashir (Figure 2.37) and the Sarvestan Palace (Figure 2.38) (Fontana, 1986).

Figure 2.36. The Palace of Ardashir, built in 224 AD, Fars Province, *Iran design and architecture (*by Khadra Abdi)

Figure 2.37. Sarvestan Palace, 5th century AD, 90 km southeast of Shiraz *Iran design and architecture (*by Barbara J)

Some design elements of Persian architecture have persisted throughout the history of Iran. The most significant are a marked feeling for scale and a discerning use of simple and massive forms in mosque structure. The consistency of decorative preferences, the high-arched portal set within a recess, columns with bracket capitals, and recurrent types of plan and elevation can also be mentioned. Each type of building has its own design and architecture, which are more or less the similar in all its forms. The mosque is no exception to this law. Therefore, all the mosques contain common elements such as the courtyard, mihrab, porch, minaret and dome. Each of them can be removed from a mosque's architecture except for the altar. It is more important than others are. The architectural elements are briefly described in following sections (Fontana, 1986).

2.6.1. Minaret

Minarets are in the form of tall and narrow towers, which are usually, built alongside a mosque to call people to pray. In the past, minarets have played the role of landmarks on roads and the beginning of cities, along with mosques, caravans, schools and guesthouses. These buildings illuminate lights or fire above them to guide passengers who came to the city at night. The word minaret or minar means the "place of light and fire", and the same meaning is used in dictionaries (Taghadosinia, 2014). Also minaret can be described as the "reminder of heaven" by Norberg Shulz because of the verticality of the form. Earliest mosques were built without minarets and the first known minaret was built eighty years after the death of the Prophet (Ürey,2010).

Conformance the deployment of Islam to Iran, public activities were largely terminated for a brief time before being resumed again heavily under the impression of the new culture.at the first minarets evidence in the shape of simple guiding axis close to the mosques before extending into elaborate structures flanking mosques and the entrance of monumental buildings. The first minaret in this country of Shoushtar Jame mosque built in the early 8th century CE is among build in Iran following the development of Islam. In the 8th century CE, minarets were made with mud-bricks. It was not until the 9th century CE that the first brick-made minaret was built (Iranian Architecture&Monuments, 2018).

Figure 2.38. Minaret from Isfahan. “Persian Architectural Heritage: Architecture”. Hejazi, M.M., 2014, MIT Press.

2.6.2. Dome

Domes are one of the major symbols of Islamic architecture. They can be seen in the most diverse forms in Iran. These domes display clay, bricks and rocks all over Iran. During various periods of history, changes and innovations appeared in various forms of dome in Iran. By the introduction of new techniques, many of the difficulties were revealed. Nowadays, regarding the careful consideration in the types of these buildings and their attention to their sustainability over the years, either in terms of structure or in the form of a complete architecture, and one can again emphasize the ability of the Iranian architect. The colour choose of domes is important. Choosing the blue colour that is a symbol of calm, balance, and spiritual is an advantage for Iranian domes when are seen from the summit of the city or the countryside. Their

domes shine like jewelled turquoise between woven urban and rural areas (Taghadosinia, 2014).

Iranian domes exhibition major variety both in construction and aesthetics. According to Pope (1976), the prevailing element in Persian architecture is the dome which directly absorbs visitors' consideration. Architecturally, the large variety of Persian domes finish in the fairly consecutive developments of former traditions and experiment of dome practice over historic age. Historically, the most important indication of early domes in the ancient Persian architecture is the remainder of a large domical building (Ashkan, 2009).

Figure 2.39. Dome. Reprinted from "Impact of Modern Technologies on Islamic Architecture in Malaysia and Middle East". Toorabally et al., 2016, Nova Journal of Engineering and Applied Sciences, 5-1.

2.6.3. Courtyard

One of the most important architectural element of Islamic mosques is the courtyard. When the design of the first mosque in the world is analyzed, it can be seen that the mosque has a square or rectangular shaped courtyard and creates a free and spiritual space for those who enter the mosque. In fact, the shape and the decorative elements

are first displayed on the same scenes. When entering a mosque, many architectural elements are seen in one place.

In the middle of the courtyard, water which is a manifestation of cleanliness is, embodied in a large pool. They have circular, square, rectangular or octagonal forms. The pond was the reflection of the verandas and the arches of the beautiful facades, which are used in the decorations and colours of Alvan simultaneously (Kiani, 2014).

Figure 2.40. Courtyard in Iran. “Persian Architectural Heritage: Architecture”. Hejazi, M.M., 2014, MIT Press.

2.6.4. Porch

The porches of the mosque in Iran in terms of the height, technical proportions and decorative elements are unique among Islamic mosques and each porch has its own special beauty. Iranian porches are often tall and proportionate to the building, as well as a very interesting and varied vault around the porches. As porches are removed from land they illustrate a state of tranquillity. Ceiling of the porches, while exhibiting a hemisphere or a semi-dome shape, is decorated with a variety of elements such as Mogharnas. The brickworks, plastering, mirroring and painting, which are beautiful and perfect in a proportional way, are used in every Building’s design. (Kiani, 2014).

The entrance of the Yazd Mosque (Figure 2.36), the Sheikh Lotfollah Mosque Figure 2.42) and the four-garden school show examples of these porches.

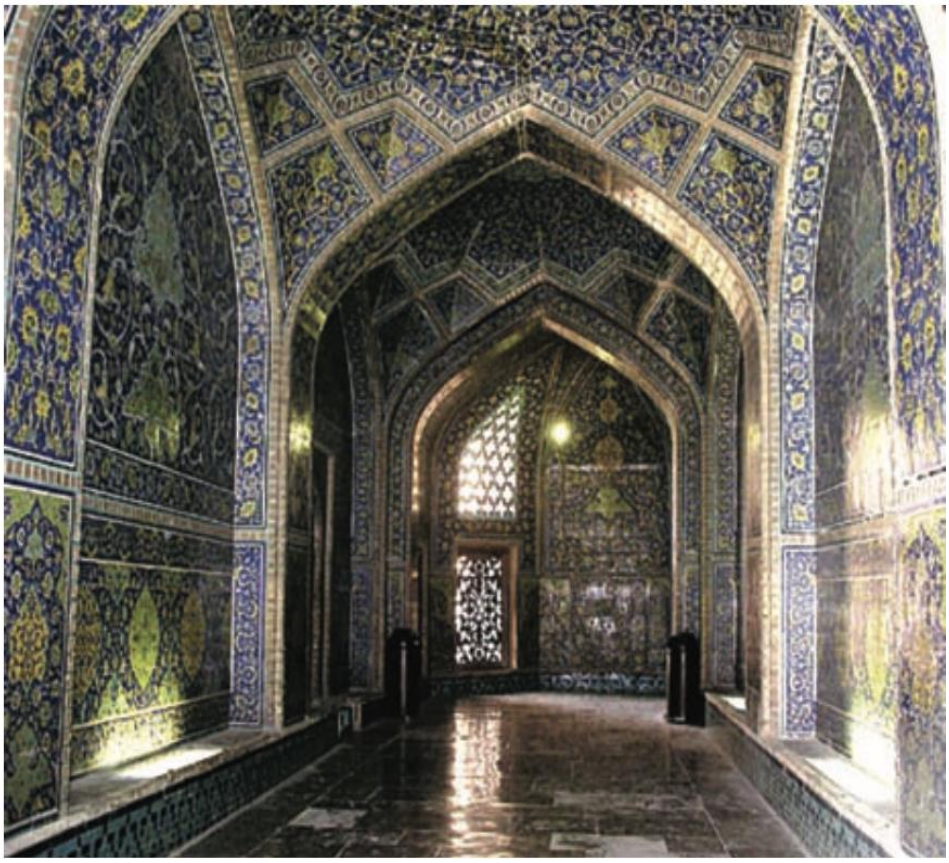

Figure 2.41. Sheikh Lotfollah Mosque. "Studying Relationship between Application of Light and Iranian Pattern of Thoughts", by A.Javani, 2010, *1st International Congress on Color and Light in Architecture, 39.*

2.6.5. Mihrab

The mihrab represents the Qiblah of Muslims and is in fact the turning point in mosque design. In mosques, mihrab is located in the middle of the Qiblah wall. So that by standing up behind the Imam people turn their face towards Qiblah. Mihrab is also made in the wall of the Qibla. It is made from the simplest to the most elaborated and logical forms. This depends on the type and importance of the mosques and their positioning (Hasanzadeh, 2013).

The Iranian mihrab is tiled with proportions, application of Alvan and mosaics and the imitation of its design in the mosques around the world demonstrates its importance. The beautiful mihrab of enamel in the Islamic Museum of Iran and the elegant sanctuary of the Mir'mad Kashan Mosque at the Metro Polin Museum of Kashan are good examples. (Taghadosinia, 2014).

Light has always been a fundamental significance in Islamic religion, as well as in its art and architecture. It symbolizes belief and sacredness, as described in the holly Qur'aan "*God is the light of the heavens and the earth. The parable of his light is as if there was a niche and within it a lamp, the lamp enclosed in glass, the glass as if it was a brilliant star is lit from a blessed tree, an olive tree neither of the East not the West, whose oil illuminates although fire has not touched it, light upon light. God guides whom he will to his light, God set forth parables for man and God is all knowing.*" Sourat 24 "The Light," verse.

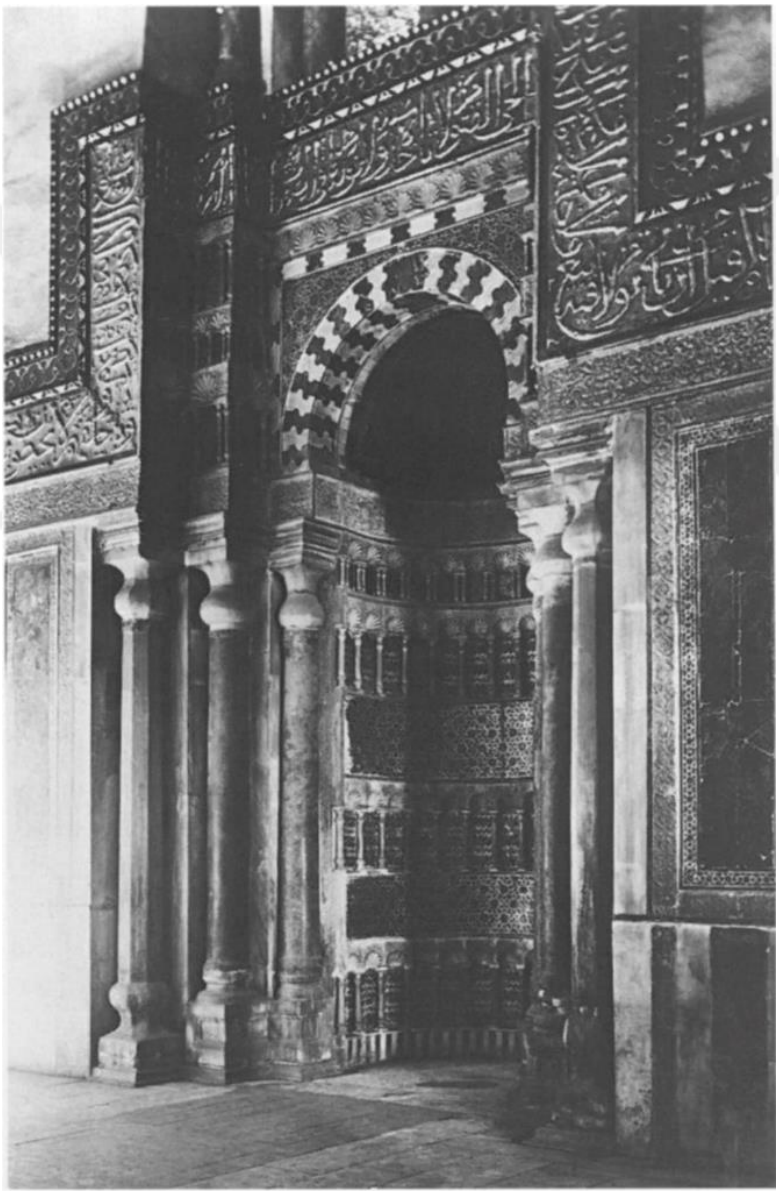

Figure 2.42. Mihrab. "The Ummayad Suvivals and Memluk Revivals", by F.B: .Flood, 1997, *Moukarnas,* 14, 57.

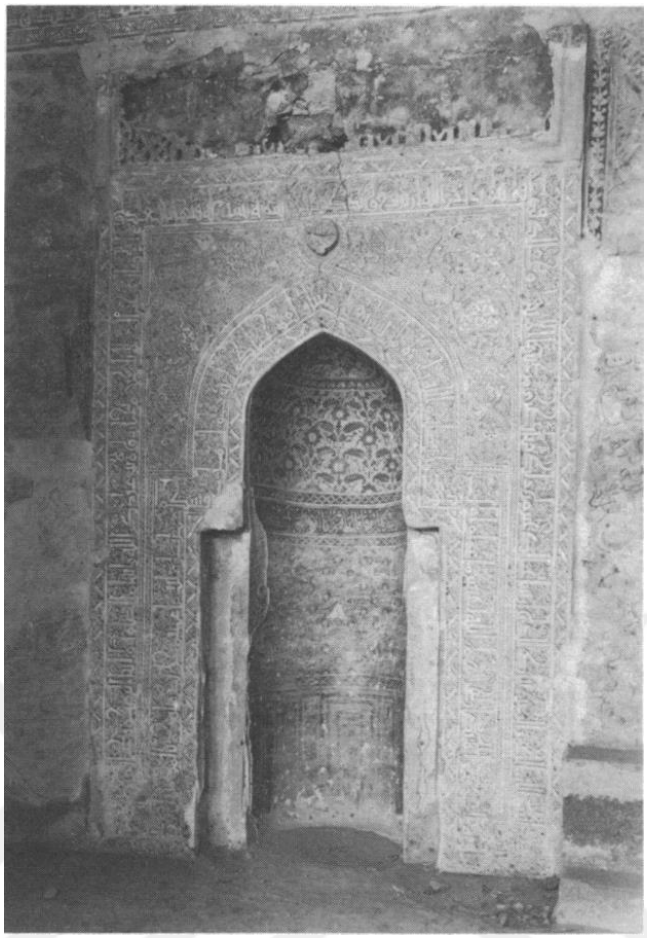

Figure 2.43. Mihrab. “The Ummayad Suvivals and Memluk Revivals”, by F.B: .Flood, 1997, *Moukarnas*, 14, 57.

2.6.6. The Ablution Area

The objective of this place is inspiration of sincerity to worshippers before praying. For Muslims, ablution is a precondition to praying and it includes performing certain actions in a specified sequence. This is referential to the ablution process. Muslims believe that out of courtesy and regard for the Allah, they should prey with a pure heart, mentality, and body. To this end, formality ablutions (called wudu) are essential before each pray if one is in a state of purulence. During ablution, a Muslim washes the parts of his body that are usually subject to dust and stain (Mokhtar, 2005).

Historically, the spout was discovered in Syria and Egypt, and it was generally a decorative specification. Ablution fountain has a central position toward external and internal features. It is usually located at the capital of the courtyard to accentuate the initial practice of water in Islam. Ablution fountains which have taps are mostly in

the form of an enormous marble jar with a foundation. Water is the vehicle of refinement and pleasure and has a sacramental condition. The ablution area in some mosques is separated from the mosque courtyard and located near the minaret. It is separated from the courtyard by a brick wall which could be used as a stool for sitting and waiting. The fountain is a concrete lavatory designed with ceramic tiles, provided with a recycling system to save water (Huda, 2017).

Figure 2.44. The Ablution of navvab. “Design Guidelines for Ablution Spaces”, by D.A. Mohtar, Ameerican University of Sharjah.

CHAPTER 3
CONTEMPORARY MOSQUES IN THE WORLD AND IN IRAN

Concepts of a sanctuary and temples have long existed in different religions, which came to evidence with the advent of Islam. These concepts reappeared in a new body called the mosque. These mosques were originally built very plainly and without any kind of decoration. The first mosque (the Prophet's mosque in Medina) was constructed with carcasses stone and using most basic materials using a shabestani method. This mode of construction (shabestani) continued for a long time (Musavi, 2013).

In the probe for modernity and nationhood early 20th century, religion was moderate to a specific area, even as the feck of the people conflict to regulate to a new world in which traditional forms of science were conceded to the aborigine scope or to an establishment that were marginalized by the investigation for modernity (Masooda Bano, 2011). In all Islamic countries, the mosque has undergone changes both in terms of its functions and in terms of its architecture and physical space. This transformation is global, and it seems inevitable.

The change of the architecture of the mosque focused on two themes, which are, the change of the function of the building and changes in Islamic societies (Serageldin, 1996).

Change of Function

The function of the mosque has changed including the new functions as community focus center, school, landmark, and center of learning and social place. From the 19th century, Muslim societies began to change with the Western modernism and the mosque loses some of the traditional functions and has new functions besides that. The new functions of the mosque made the mosque architecture more complex rather than a single praying space of the ancient mosques. This change of the function is arising in nineteenth century, when the Muslim societies meet the western world. So new non-praying spaces that occurred and evaluate in the mosque architecture sign of a more liberated architecture (Serageldin, 1996).

Change in the Society

In addition, economic conditions and changing character of the city have an effect on the change of the function of the mosque in the city. The complexity of the city increased rapidly and by the rise of the new structures, the landmark function of the mosque has changed. Various factors such as rationalism and the development of science, philosophy, and in particular the spread of technology, led to the improvement of modernism (Serageldin, 1996).

Table 3.1. The Aga Khan Award for Mosque Architecture 1995-2019 Cycle

Mosque	**Country**	**Architect**	**Date of Construction**	**Award date**	**Specification**
Faisal Mosque	Pakistan	Vedat Dolakay	1986	1995	four tall minarets, without dome, traditional marble and mosaics
Bait Ur Rouf Mosque	Bangladesh	Marina Tabassum	2012	2016	traditional and local materials, use natural light, two separate structures and forms, brick walls, eight circumferential columns
Sancaklar Mosque	Istanbul	Emre Arolat	2013	-	natural stone, cave-like, stone roof, modern oblong minaret, concrete wall, without dome
Grand National Assembly Mosque	Ankara	Behruz and Can Çinici	1989	1995	traditional elements, mosque design, terraced garden and pool, shortened minaret, traditional mosque architecture

According to table 3.1, choose the mosques which winner the Aga Khan Award during 1995-2019 Cycle. In this period, there are mosques that win the award too, but their subject was restoration and in another hand, our aim is to search the mosque in the Asian area, therefore selected tree mosque that constructed in Turkey, Pakistan, and Bangladesh countries. With investigation about all of the mosques, can be seen the reason for winning the award of Aga Khan is the elements common structure,

traditional material, and important of all traditional architecture style .Each mosque has particular specification architecture, which distinguishes them in comparison with others. For example, Faisal mosque has five minarets without a dome and main prayer hall is decorated with traditional marble and mosaics. Bait Ur Rouf mosque is famous for light to mark the qibla and at the same time, natural light brought in through a skylight is ample for the daytime. In Grand National Assembly Mosque traditional elements of mosque design while using the language of contemporary architecture. Shortened minaret, anticipated dome and landscaped garden outside are another foundation that clearly seen in the mosque.

The reason for selecting the Sancaklar mosque is the resemblance to Vali-asr mosque in Tehran, which is one of the case, studies that description in chapter four. Both of them have the modern and distinct architectural style and exactly away from traditional structure and material. The common material, elimination of dome and different interpretation the minaret in the structure of modern architecture is the identical style in both constructions of mosques.

3.1. MOSQUES

3.1.1. Faisal Mosque

Faisal mosque is located in Pakistan, İslamabad and one of the Aga Khan Award winner mosques in the world. The mosque was designed by the architect Vedat Dalokay and win in an international contest then built as a national mosque in 1986. The mosque has a modern look without dome or traditional arches but the shape of the mosque was derived from Arab tents. This tent like structure covers the main prayer hall. The main prayer hall was decorated with traditional marble and mosaics. The mosque contains a courtyard and many public functions as library, museum and cafe. The unique design of the mosque was first done not accepted by the conservative Muslims, but after the mosque was built the criticism died down. In addition, the mosque is used as a campus building for the University of Islamabad (Faisal Mosque, 2017)

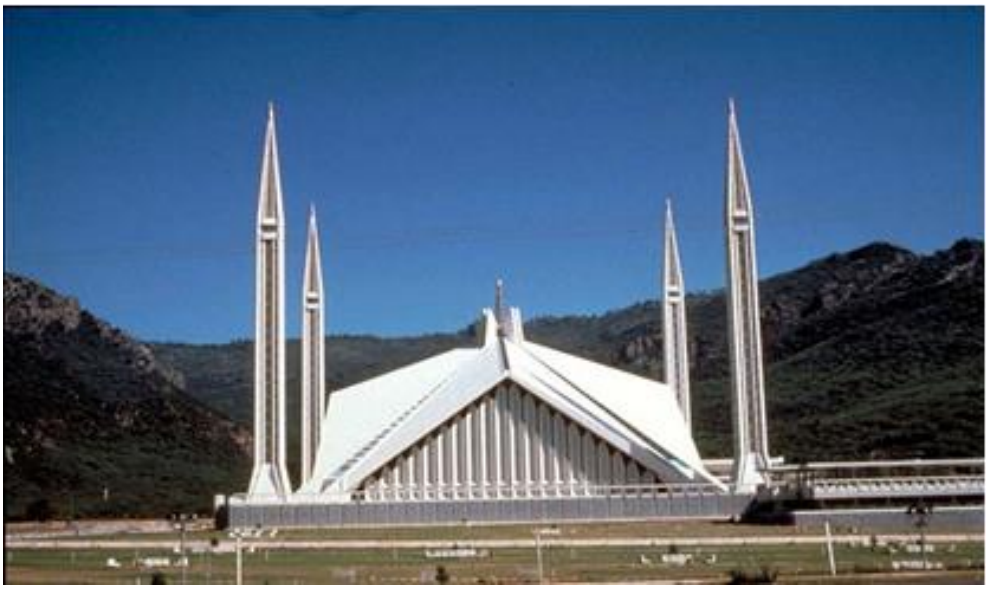

Figure 3.1. Faisal mosque. 2017. Arch net, Retrieved from https://archnet.org/

3.1.2. Bait Ur Rouf Mosque

Bait Ur Rouf Mosque is one of the Aga Khan Award winner mosques of the world, which is located in Bangladesh. The architect of the mosque is Marina Tabassum and built in 2012. High plant around the irregular shaped land covers the inner space from outer world. The mosque is located on the plinth. There are two separate structures and two separate forms in the design of the mosque. First, is the load bearing system which made by brick walls that create small spaces and the other is reinforced concrete system that creates a column-free prayer hall. The dramatic effect of the light is used in prayer hall (Mosque in Dhaka, 2016).

Figure 3.2. Mosque in Dhaka. Domusweb, 2016. Retrieved from *https://domusweb.it*

Brick is used as a traditional material in the mosque. The results in the creation of four voids at the corners are the rotation of the prayer hall in the middle of the building. These spaces construct small courtyards, with open brickwork allowing light and air to filter into the interior. Natural light brought in through a skylight is ample for the daytime and this Light used to symptom the qibla direction, which is known by a vertical gap in the cylindrical brick wall that is visible through a large opening in the wall of the prayer hall (Griffiths, 5 March 2017).

Figure 3.3. Mosque in Dhaka. Domusweb, 2016. Retrieved from https:// www.world-architects.com

In this project quality of space and architecture proves that with the use of local materials and proprietary artist, and an intention towards spirituality through light can span the distance between here and unlimited, between today and eternity (bait ur rouf mosqu, 2017).

3.1.3. Sancaklar Mosque

Sancaklar Mosque was design by architect Emre Arolat and built in Istanbul, Turkey. High walls to make a clear boundary between the chaotic outer world and peaceful spaces of the mosque surround the courtyard of the mosque. In addition, building gets lost in the topography, so entering the mosque means leaving the world behind. Besides these features, the cave-like inner space of the mosque increases the spiritual expression of the inner space. In the prayer hall, from the direction of the Qıblah, the daylight dramatically enters the praying space. The inspiration of the cave-like praying space is from the Cave Hira (Sancaklar Mosque, 2015).

Figure 3.4. Sancaklar Mosque. Domusweb, 2016. Retrieved from https://domusweb.it

The interior of the mosque, a simple cave like space, becomes a dramatic and awe-inspiring place to pray and be alone with God. The project continuous plays off the attraction between people and nature. The Conflict between the natural stone stairs below the natural tilt of the landscape and the thin boosted concrete slab spanning over 6 meters to form the sunshade helps increase this dual communication. The building combined entirely with the topography and the out of the world is left behind as one moves through the landscape, down the hill and in between the walls to enter the mosque (Sancaklar Mosque / Emre Arolat Architects, 2014).

Figure 3.5. Sancaklar Mosque, 2016. Arch daily. Retrieved from https:// www.archdaily.com

3.1.4. Grand National Assembly Mosque

Grand National assembly Mosque that located in Ankara is at the south side of the TBMM (Turkiye Buyuk Millet Meclisi) campus and with Aga Khan Award for architecture design by Behruz and Can Çinici in 1989; it instantly became one of the prominent contemporary religious buildings in Turkey. Due to locating, the mosque at the TBMM Campus and it is exactly a proprietary easiness only for the employees of the assembly and not for the public. Accordingly, in the regulation of its station within the urban context, it can be rightly alleged that it does not have any role in the habitats of the city it is in, however it is placed in a dense populated municipal zone in Ankara between a commercial and a local zone (ÜREY, 2010).

Figure 3.6. Grand National Assembly mosque. Archnet, 2017. Retrieved from https://archnet.org/

The harmony of the mosque with the topography, as inserted onto a mound. Until come close to the building, it is not possible to comprehend its real scale. As regards as Balamir and Erzen commenting, this mosque succeeds in preserving the traditional elements of mosque design while using the language of contemporary architecture. It construct a prosperous modern combination that utilizes the references and foundational concepts of the Islamic place of worship (ÜREY, 2010).

The mosque is construct of a triangular forecourt, and a rectangular prayer hall overlooking a large, overlooking a large, triangular, terraced garden and pool. Instead of a full courtyard with porticoes, for example, the architects have cut the courtyard in half along a diagonal line connecting the southern and northern corners. Bordering the courtyard porticoes, and taking their place within the structural module, are column bases without axis or capitals, intended as reflection of traditional sheltered promenades (Khan, 1995).

Figure 3.7. Grand National Assembly mosque. Archnet, 2017. Retrieved from https://archnet.org/

Another consciously imperfect source in the past consist of the shortened minaret, in addition, the stepped pyramidal roof in place of the anticipated dome. About the position of qibla wall opens towards the terraced garden and this uncommon regulation through converted the function of prayer. With imagine about mihrab elements, which use glass and a landscaped garden outside, worshipers is closer to nature. The jury in Agha Khan Team believes that this modern and new centre for worship is a significant and fundamental step in the development of an appropriate architectural vocabulary for the contemporary design of mosques (Khan, 1995).

To conclusion, it can be reason that all the traditional elements referenced in this mosque are interpreted in a spacious and elaborate method the architects have interpreted traditional mosque architecture comprehensively, from mass-façade

Amounts to interior elements (ÜREY, 2010).

Figure 3.8. Interior, prayer hall. Mosque of the Grand National Assembly, 1989, Ankara, Turkey. AKTC

3.2. HISTORY OF CONTEMPORARY MOSQUES IN IRAN

To comprehend and appraise contemporary architecture of Iran, it is obligatory to look briefly at the development of socio-cultural phenomena over the last hundred years. Since the Qajar dynasty of the last century, a fracture with the long-lived dynasty of traditional habits has transpired. Iran, whose culture is supported essentially by Islam and its metaphysical concepts, is being verified with new Western valence: scientism, rationalism and new political and economic observation (Muṣtapha, 2016).

Religious buildings, such as mosques, madrasas, and shrines, were not yet the center of national consideration in the early years of the 20th century. Instead, they were judged for their “age valence” and, supported on that valuation. They were either dorsal or combined into the lately appointed heritage industry. In early-20th-century Iran, Islamic architecture was rarely given more consideration; instead monuments from the Achaemenid and Sasanian periods (from the 6th century BCE to the 7th century CE) were studied and documented as a revelation for modern construction. Since the 1979 revolution, mosques, and temples from the Safavid period (1501–1722) mainly have come under further interest (Rizvi, 2008).

Despite the fact that the history of modern architecture in Iran dates back many years

ago, unfortunately, due to the attitude of citizens to mosques from the aspect traditionally and religiously disapproved of their conformity with modernism and on the other hand, the lack of permission from the government, history of contemporary Mosque architecture return back to 1976 (Serageldin, 1996)

Nowadays, contemporary mosques in Iran, with a direct pattern of traditional forms of mosques, and the use of modern materials within this framework was constructed in a traditional manner combining modernity in their design. Designing a mosque is always a problematic issue for the architect because of the way they will use traditional elements as minaret, dome, gateway or mihrab. The interpretation is not easy but as it can be seen from the examples, which are Aga Khan Award winners, the creativity has many ways to do it.

To demonstrate and investigate this study has chosen some case studies in order to explain the problem. Data available appears to suggest that in Iran, contemporary mosques are mostly located in Tehran, capital city of country. The first aim in choosing these cases was to find out how successful contemporary mosques interpreted the tradition in their design.

As you will see in the following pages, five cases have been studied altogether. Three of these are in Tehran; one of them in Isfahan and other last is in Busher city. About Imam Reza complex in Tehran and The Mosque & Implementation Religious Rituals in Isfahan should explain that in these two buildings the mosque was convene. The Qods mosque in Tehran is a case renovation and causes to have many polemics about its idea and design. BCF Mosque, Bushehr is an interesting example, which won Aga Khan International Award in 2004. It is located in the desert part of Iran near the cement factory. The last case is located in capital city of Iran and is called Vali Asr Mosque. It has a long story about its design and architecture. It should have been completed many years ago but still is under construction. Figure 3.1 indicates the five contemporary mosques located in three cities of Iran (Kiani, 2014).

Figure 3.9. Map of Iran (photography by Iran Map)

The second and main focus point of the study is to contribute to the contemporary mosque architecture by analyzing these five examples. In Iranian architecture, there are many contemporary buildings can be seen, but when it comes to mosque design contemporary mosques are hardly accepted by the local administrations and also people because mosque has a strong symbolism in Islamic architecture and expresses the cultural and religious identity. In contemporary societies, by the change of the character of the society, the architectural expression of the mosque has been lost. Iran local governments are sensitive about losing identical expression and symbolism of the mosque architecture (Serageldin, 1996).

By analyzing, these five successful examples based on how they used traditional elements and how they adapt new materials to the mosque design, a contribution will be made for the future projects.

3.3. IMAM REZA COMPLEX, TEHRAN, IRAN

Figure 3.10. *Imam Reza Complex. Kalout Architect Studio, 2012, Retrieved from https://kaloutarch.com/*

3.3.1. Project Information

Architects: Kalout Architect Studio

Location: Tehran, Tehran, Imam Hossein Square, Iran Architects in Charge: Saeed reza Boreiri, Samaneh Ghasempour Area: 6500.0 sqm

Project Year: 2012

This building, by its form and design, is the first example of a contemporary mosque in Iran. Because of the surrounding elements, this mosque has a very introverted interior space. In the construction of the project, there are some references to the social personality of its users to remind them of their memories from the Islamic and Persian history.

In general, multi-use developments are some of the most stimulating projects for architects. The Imam Reza complex was designed by a local firm (Kalout Architect Studio) and is located in the cultural area of Iran’s capital Tehran.

The reason that Imam Reza Cultural and Religious Complex is a lively urban space for people of all ages and social groups is its design of different spaces. It integrates social, cultural and religious spaces. Using the traditional art and architectural features of archaic styles Persian sunken gardens (Figure 3.3) and underground spaces, help people who even do not pray and just use the bookshop or the cafe. The use of traditional architectural elements as sunken gardens is the reason that Iranian society accepted the building as a space for praying(Imam Reza Complex, 20 February 2016).

Figure 3.11. Ancient garden of Eram Garden, (1750-1794) (Shiraz, Iran), traditional Iranian fountain system

Figure 3.12. Ancient garden of Fin garden, 1852, historical Persian garden (Kashan, Iran)

3.3.2. Architecture Of Building

The idea of collective hands has to show a symbol of unification and public continuity. Sequent this main shape, the side wings of the building with the complementary subordinate bulge from and remains on the ground to construct an inventive form optical. The architect's aim of built the roof in the form of convolve fingers, symbolizing "unification and social correlation". The Cultural and Religious Complex Imam Reza won the Architizer A + Award 2016 Prize for Religious Buildings and Monuments (Imam Reza Complex, 20 February 2016).

3.3.3.Concept

The architects shaped this cultural and religious center with the idea of intertwined hands as a symbol of unity and social cohesion between different social groups. It was a stimulus to the presence of the new generations (Imam Reza Complex, 20 February, 2016).

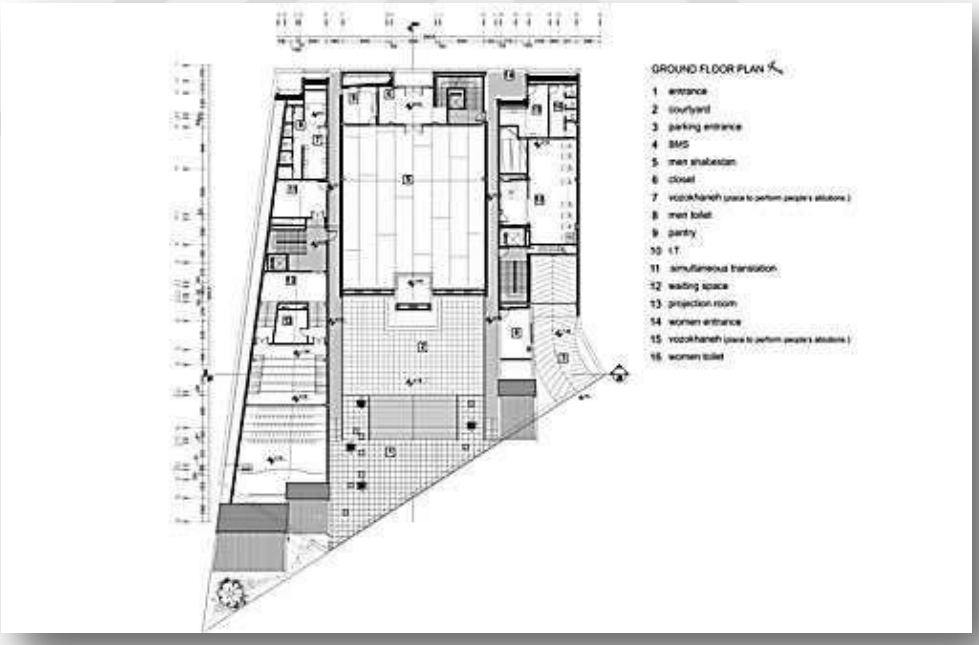

Figure 3.13. Ground Floor Plan. Kalout *Architect Studio,* 2012, Retrieved from https://*kaloutarch.com/*

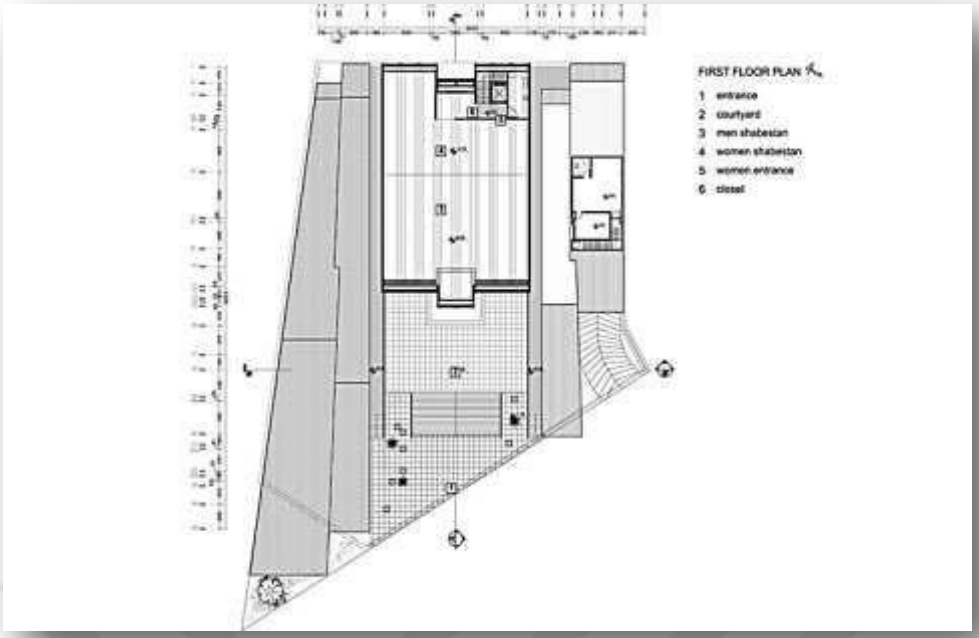

Figure 3. 14. First Floor Plan. Kalout Architect Studio, 2012, Retrieved from https://kaloutarch.com/

Figure 3.15. Underground Floor Plan. Kalout Architect Studio, 2012, Retrieved from https://kaloutarch.com

3.3.4. Spaces

The building includes several functions and sidelong corridors along the “shabestan” connect all of them. The architects designed diverse functions by distributing them into several wings. The central “dome” with arches and covers the “shabestan”, and has an underground space typical of Iranian mosques, houses, and schools. Underground space is an important characteristic of architecture in ancient Persia, supports the footprint in the complex and leaves on the ground a comparably minimal space, without affecting architectural style or utility(Imam Reza Complex, 20 February 2016).

Figure 3.16. Jameh Mosque of Isfahan by (Pedram Akbari)

Figure 3.17. Nasir Almolk Mosque of Shiraz (by Amin Sabr)

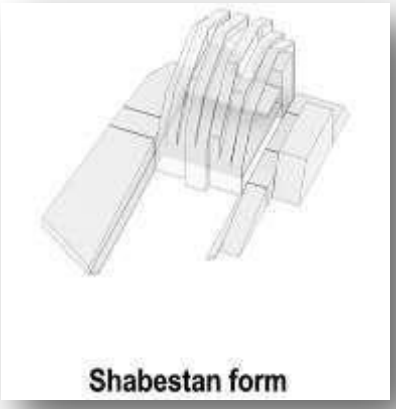

Figure 3.18. *Shabestan Placment. Kalout Architect Studio, 2012, Retrieved from https://kaloutarch.com*

Figure 3.19. *Shabestan Form. Kalout Architect Studio, 2012, Retrieved from https://kaloutarch.com*

3.3.5. Yard

In this project, the yard has different functions and is an important space, especially for the meaning of a cedar statue representing “constancy, life, and freedom.” The elements, which are used there, take ideas from traditional Persian architecture and include a sunken courtyard with a small fountain.

The place allows users to move away from external chaos and realize quietness. Separating people from the daily life and at the same time participating in the process of transference of meanings. The attendance of water increases the transparency of the design. Water also adds a feeling of composure to the complex in keeping with the philosophical and immaterial meaning of the place (Imam Reza Complex, 2016).

Figure 3.20. .Yard of Imam Reza Complex. Kalout Architect Studio, 2012, Retrieved from https://kaloutarch.com

The building consists of a number of functional zones including:

A mosque: For Worship and prayer.

An art gallery: That includes some craft for sale and gallery for artists.

A bookstore/coffee shop: For the public, they can relax and drink a bit at the same time as reading.

An amphitheater: To perform ceremonies, theatre and conference.

An IT Centre: A place for young people and students to use computers.

3.3.6. Materials

Islamic art and calligraphy decorate almost all surfaces of the Imam Reza complex. Being a religious construction, much calligraphy has the meaning of worship. In fact, many of the materials used point at indicate Islamic ideals. The architect used bricks in the corridor, regular artistically, next to glass to "exhibit the symbolic skyward process of the earth into light." The significant part of the building is its main dome, which is covered with glass and framed by steel. All were made by hand and engraved with religious writings. (Imam Reza Complex, 20 February, 2016).

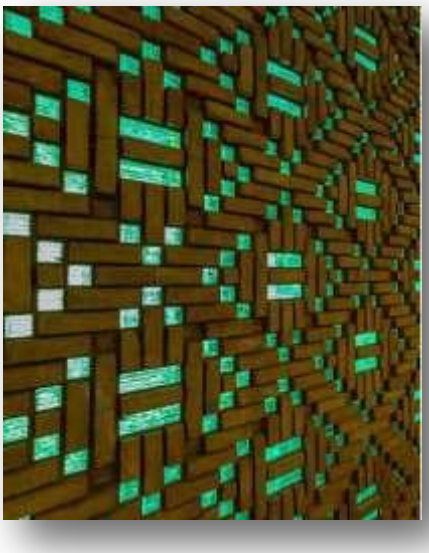

Figure 3.21. *Imam Reza Complex, Tehran, Iran Inhabitat, by Author N. Jewell, 2017, retrieved from www.inhabitat.com.*

Figure 3.22. *Imam Reza Complex, Tehran, Iran Inhabitat, by Author N. Jewell, 2017, retrieved from www.inhabitat.com.*

3.4. QODS MOSQUE, TEHRAN, IRAN

Figure 3.23. *Qods Mosque, View* from Darya Boulevard (photography by Pooria Abaci)

3.4.1. Project Information

Name: Qods Mosque Renovation Concept Architect: Arash G Tehrani

Location: Darya Blv. Tehran, Iran. Date: 2011

Type: Religious

Status: Concept proposal

Client: Tehran Municipality, region 2

The most contemporary mosque, which has caused many polemics about the idea and design, is Qods Mosque is located in one of the armful crowded crossroad of Tehran. The Mosque is included in a tent-shaped building and has an unfinished minaret. The client (Tehran Municipality) needed to remove the non-Islamic face of a pyramid shaped mosque and to renovate the urban landscape.

3.4.2. Architecture of Building

As suggested by the municipality offer the building was to a semi-transparent urban facade to an incomplete cover. The architect used traditional architectural styles to form the skyline of the mosque where the dome, gate, porch and minaret located. A multi-functional porch covered by the Persian Islamic patterns. “Porches could be seen in every city and building in historic Iran,” said Tehrani. “These porches are one of the most important parts of the historic Persian mosque called ‘Ravagh’. Therefore, they function for the public service with the use of facade for provisory book shows or religious ceremonies. It can be a shelter for all age group when people want to rest here all day. The client underline not to eliminate the envelope of the mosque design. Therefor they were modeling a semi-transparent urban façade with the use of Islamic pattern (Tehrani, February 11, 2015).

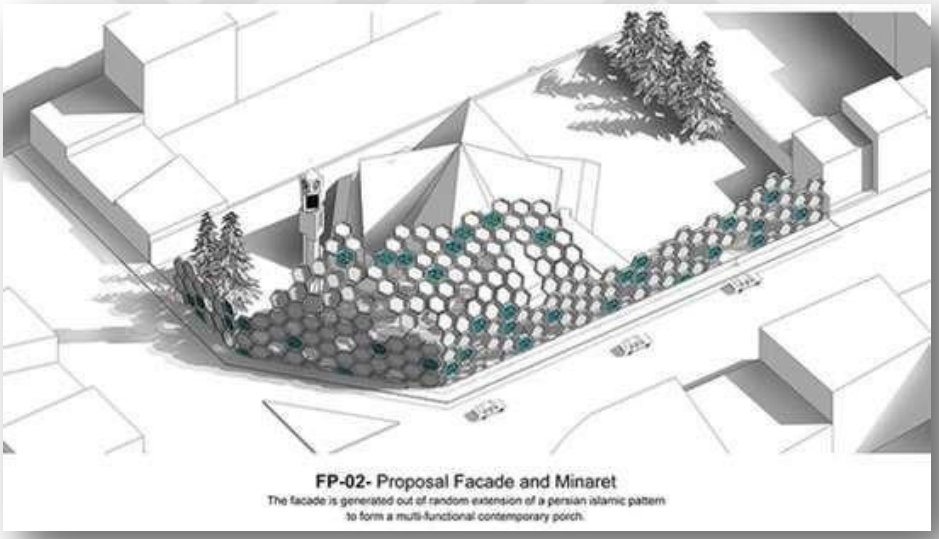

Figure 3.24. The *Qods Mosque, Façade* and Minaret (photography by Arash G. Tehrani)

3.4.3. Concept

Iranian architect Arash Tehrani has suggested a design concept in orders to renovate the Qods Mosque, which was so distinct from other mosques. The architect explained, “The current situation has a confounded landscape with several wrongly installed objects.” He added: “The mosque consists of a tent-shaped building and an unfinished minaret. Tehran Municipality needed to remove the non-Islamic face of a pyramid mosque and also to renovate the urban landscape” (Tehrani, February 11, 2015).

3.4.4. Spaces

The pattern of the mosque has a characteristic position in Iranian architecture as we can see it in all of the mosque designs of the past. As for this subject and incorporate it with the geometry of the minaret designs, three cubes were placed in different axe. Three squares are intuitive of dodecahedron Islamic pattern (star) and each of them revolve around a special axis to create a subsidiary cubes. They are placed for public service. This facade could also provide temporary book shows, be a place for religious ceremonies or even a shelter for an old woman to rest in the shadow during a walk (Tehrani, February 11, 2015).

Function of three cubes:

Each of the three-cube designs represents a distinct function. The first cube displays the “Light” in Islam and the “fire” on the top of the minarets. In Iran as long as all the mosques show the place and dignify a buildings use, are chained aim lamps to decorate the minarets at nights. This cube could be used as urban LCD itself and directed to the vernacular zone of the Darya Boulevard. Second cube is design of for the Muezzin’s place. It is to hear the azan, have sounding systems and have two facades. In one side of this cube, we can see small window-port, which is in axis with Qibla, and the other is directed to Darya crossroad. The third cube must important mention in that it points at a principal direction, which could memorialize the invitation, which was one, the most important functions of Al-masjed Al-Nabawi (Tehrani, February 11, 2015).

3.4.5. Yard

As we observe from the foregoing about the façade, there is an archway in front facing the building. It includes the yard of the mosque. It was designed with a chromatic pattern of Iranian traditional Architecture. The main yard is at the right of the building but as regards the architectural design of the front yard, it caused to shadow several spaces, which people prefer to use (Architecture, 2009).

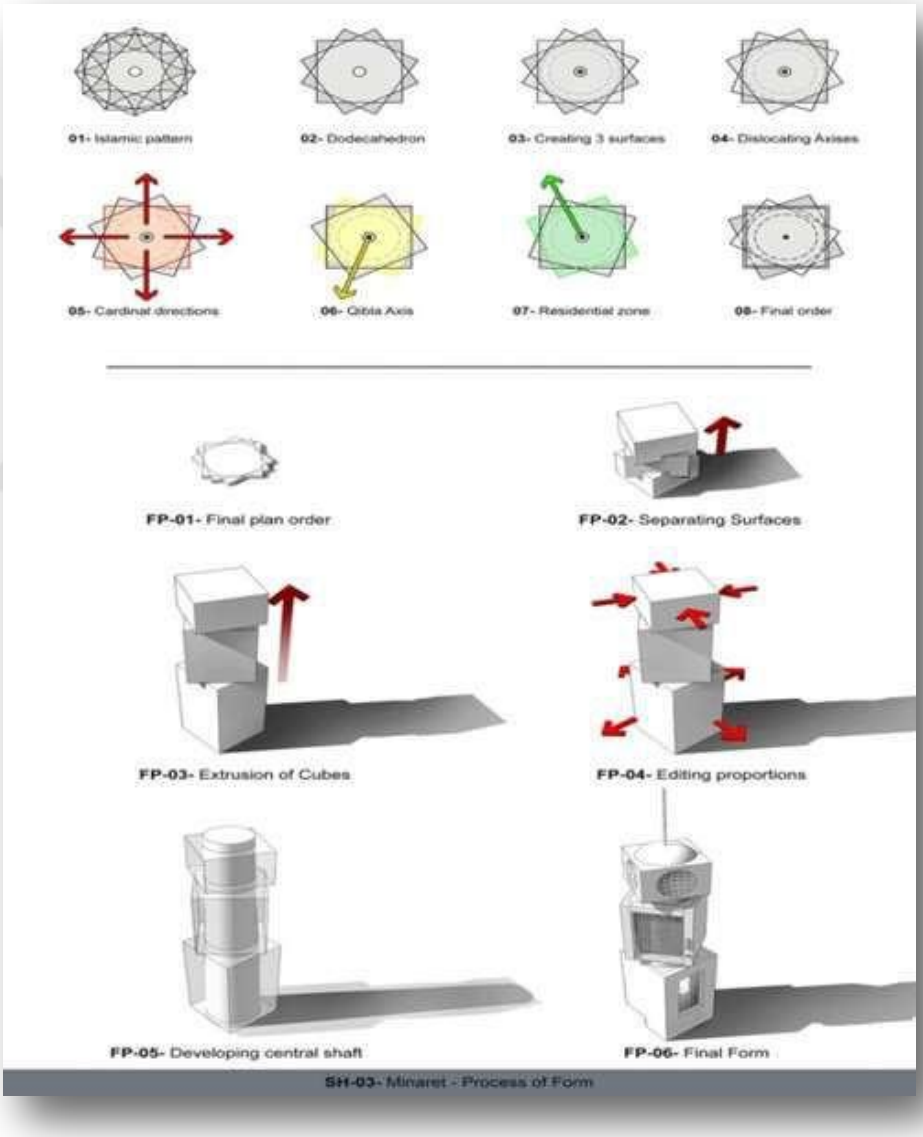

Figure 3.25. Process of minaret of Qods Mosque, form (by Pooria Abaci)

Figure 3.26. *Qods Mosque,* East side of the façad (by Pooria Abaci)

3.4.6. Materials

All parts of the façade were prefabricating in the factory. There are three types of tiles having the same size; one-including Ali pattern, two- surfaced tile and three- rings only. The main structure was installed in its place by using prefabricated steel, and then tiles would be installed on their place. The material for the inner tile surfaces is transparent concert (Architecture, 2009).

Figure 3.27. *Qods Mosque,* Design process (by Arash G Tehrani)

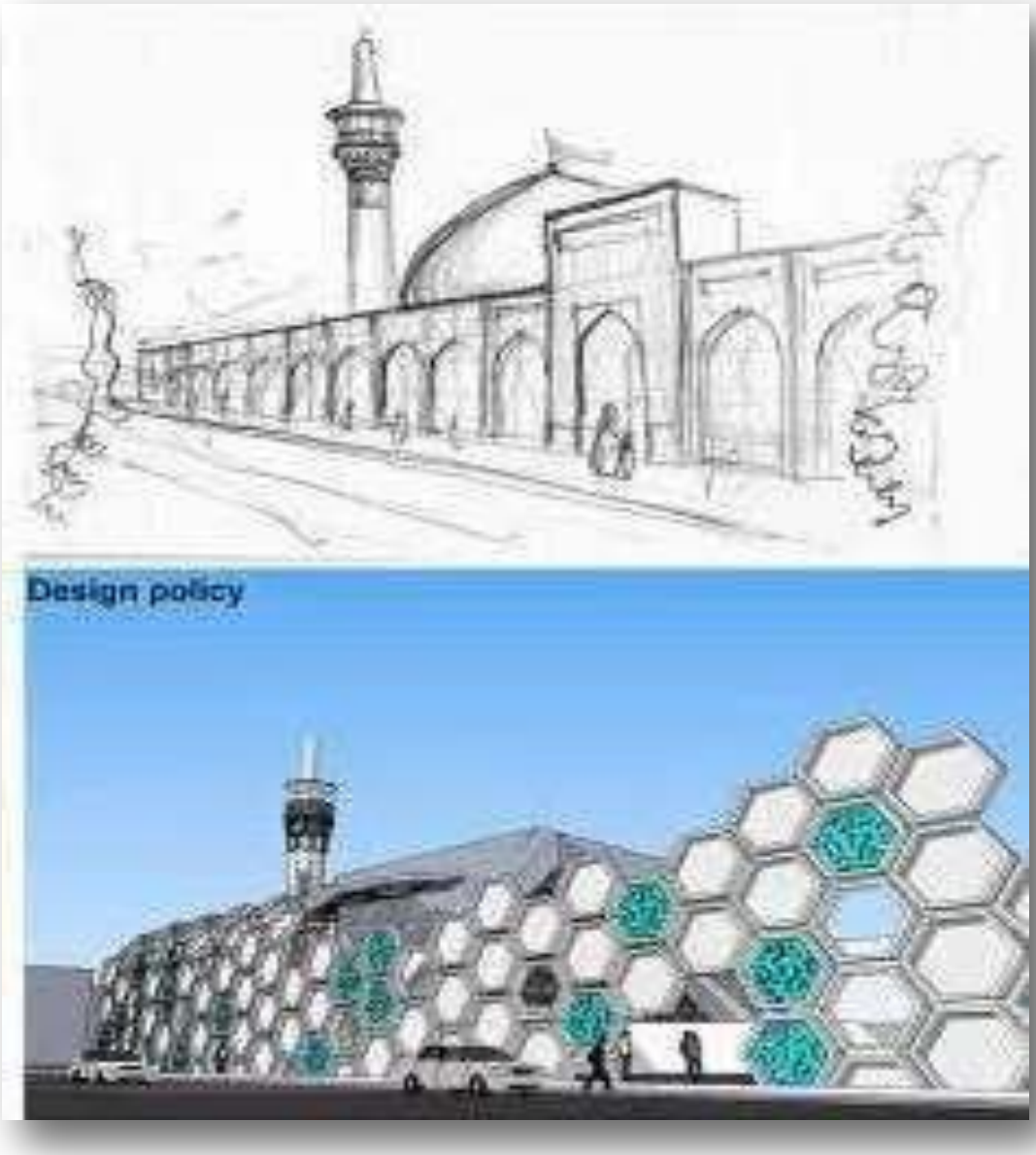

Figure 3.28. Qods Mosque ,*Design policy (by Arash G Tehrani)*

3.5. THE MOSQUE & IMPLEMENTATION RELIGIOUS RITUALS, ISFAHAN, IRAN

Figure 3.29. Mosque building & implementation religious rituals (by Hamed Fotovvat)

3.5.1. Project Information

Name: The Mosque Building & Implementation Religious Rituals Location: Isfahan (12 Km Isfahan – Naein Road), Iran

Architect: Hamed Fotovvat Date of design: Winter 2010

Date of Construction: Spring – winter 2011 Built Area: 350 sqm

Building Type: Public Buildings, Religious

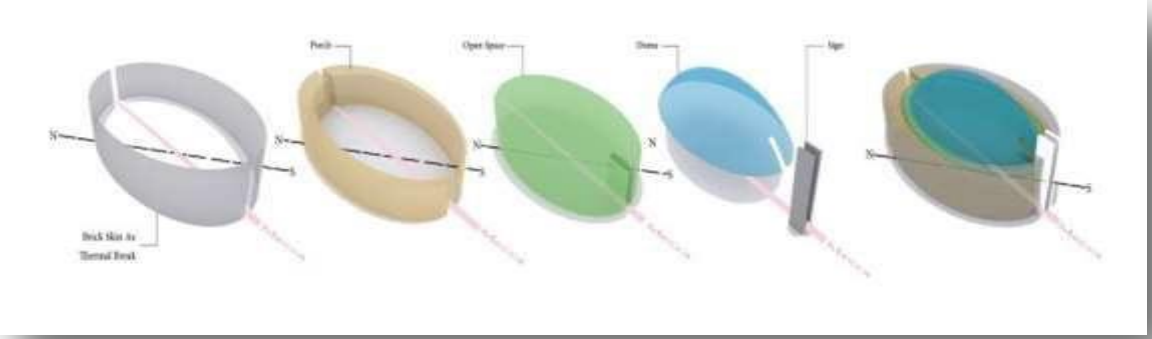

Figure 3.30. The first design of the mosque building & implementation of religious rituals (by Hamed Fotovvat.)

3.5.2. Architecture of Building

The walls of the mosque have two outer layers. The facade of the mosque is composed of a porous membrane made of bricks. The main aim of the membrane is to provide shade and peaceful and spiritual effects to the mosque, but the other aim is to provide sound and heat insulation for the mosque. The minaret of the mosque is yet another example of innovation in the building of minarets in Islamic architecture. The outer layer to ravagh[6] fronts the lobby using the main material of glass (The Mosque & Implementation Religious Rituals, 23 April 2016).

In top of the inner layer, we can see the turquoise dome that gives spirituality and heavenly color into the building. Light passing through the interior of the mosque is orientated towards the Qibla. Its design has been observing the five pillars of architecture, including the creation of transparent and fluid spaces and enjoying comfort for worshipers. Mosque entrance is wooden and when it opens, visitor can see the outside panoramic view (The Mosque & Implementation Religious Rituals, 23 April 2016).

[6] Ravagh is Indoor spaces are column and connects the mosque to the shabestan at the entrance

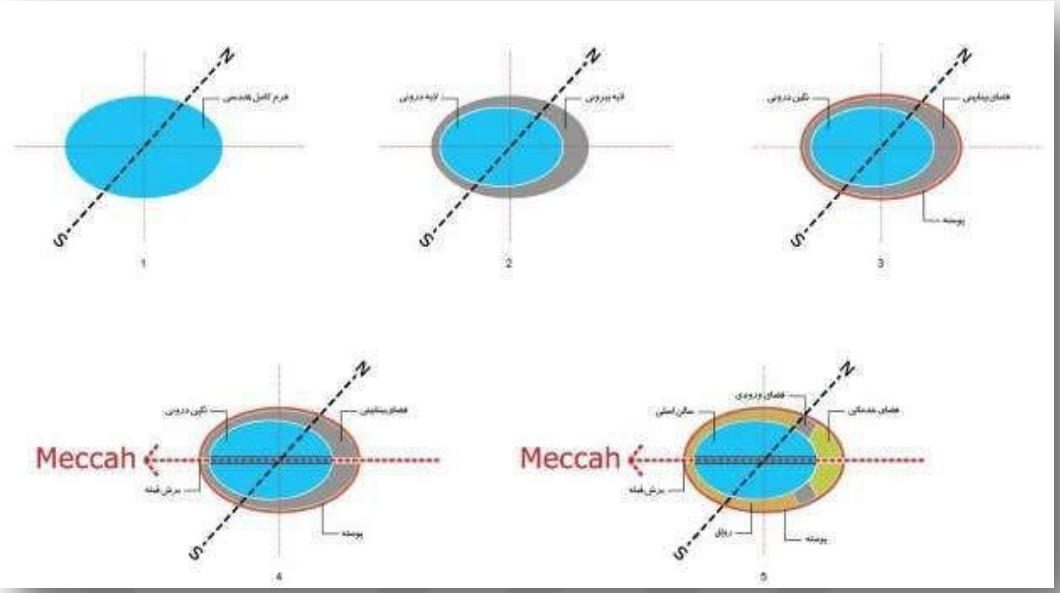

Figure 3.31. The first design of the mosque building & implementation religious rituals (by Hamed Fotovvat)

Awards:

1st prize of religious buildings, and the second award of design and architecture for façade with an urban landscape point view (Architecture and Construction Magazine) - 2011

This building was design for the public buildings in the first biennial of Iran Architecture and Interior design 2014.

3.5.3. Concept

One of the interesting things that effect the form of a building is the variety of its spaces. The main idea of designing the plan of the prayer room as an oval shaped nest is to peace. This volume is in addition to the functional spatial dimensions can also have responsive design. The volume was designed to drive a wedge extending in the direction of Mecca at the beginning and end of the volume and a linear light protecting into the mosque doing prayers. All physical characteristics are designed by considering the effects of perspective, comprehensive landscape, climatic and effective use of energy (Dehghan, 2017).

3.5.4. Space

The porous form of the outer shell creates a space with light and shade in inner spaces. At the same time, it provides the user to view the outside. There are wooden gates that open with hinges and generate wider visibility to the outside world. Materials used in the building make the shell coordinate with the climate and the environment. The gap in the front and the back view of the building continues into space, guided by the light of day and night, without any clear singe denote the direction of Qibla (Kiani, 2014).

Figure 3.32. The interior design of the Mosque & Implementation Religious Rituals, Isfahan, Iran (Source: caoi.ir)

3.5.5. Yard

The yard of the building is summarised to circumvent of all around the structure.The porch surrounding the building between bricked shell and glass, facilitate movement around the building. The yard of the building is summarized to circumvent of all around the structure. Because of the mosque is on the main road and adjacent the highway, it is not the busy location then just for the passengers build the parking near the building (Dehghan, 2017).

3.5.6. Materials

The front lobby of the building made of glass and brick, refers to their cause to footwork comfort. In another view, we can see the membrane that is covered with firebrick. Most of the interior facing is made with cavity glass and all of them help the thermoregulation of the building and keeps cool in summer and warm in winters. This production saves in use of energy. Role of the shell, depending on the materials used, is sound and heat insulation (The Mosque & Implementation Religious Rituals, 23 April 2016).

Figure 3.33. Material of the Mosque & Implementation Religious Rituals, Isfahan, Iran (Source: caoi.ir)

Figure 3.34. Corridors of Mosque & Implementation Religious Rituals, Isfahan, Iran (Source: caoi.ir)

3.6. BCF MOSQUE, BUSHEHR, IRAN

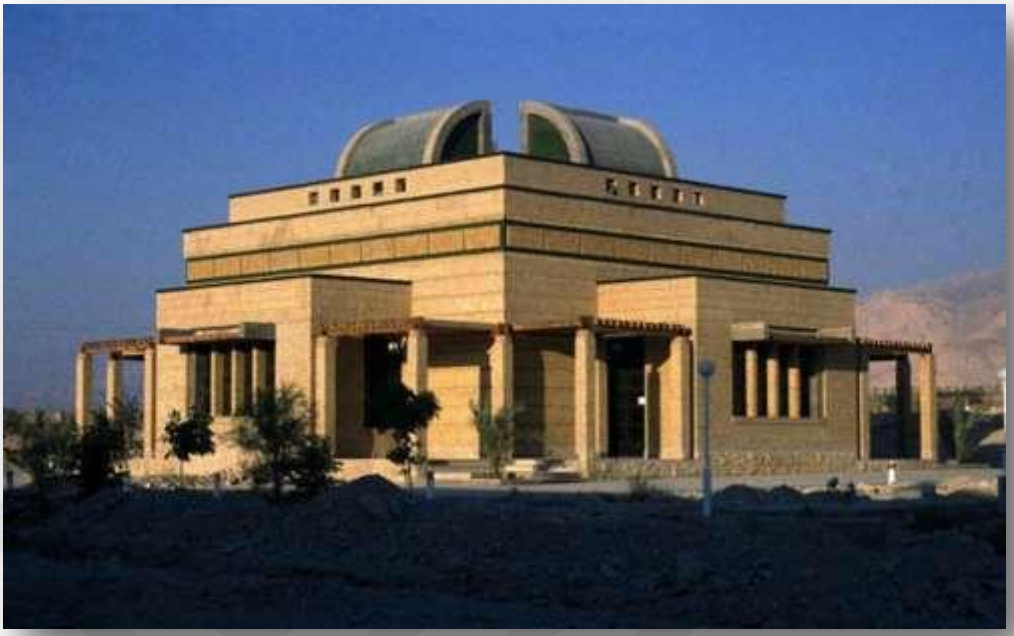

Figure 3.35. BCF Mosque, Bushehr, Iran, 2001 - 2003 (architizer.com)

3.6.1. Project Information

Firm: Contemporary

Architecture of Iran Type:

Cultural › Religious

Location: Borazjan, Bushehr,

Iran Architect: Hamid

Erfanian

Date: 2001 – 2003

Area: 600 sqm

Client: Bushehr Cement Factory

The project represents the main mosques in Iran with two awards and one of them is from Agha Khan. Location of the building is in an industrial region. Exactly near the exist of the Cement factory which has the same name of the mosque.It is located in the middle of a landscaped ground, which was designed as a “Persian Garden”, along with an office building, guesthouse restaurant. There was far from the production line, in the desert environment, of Southern Iran, in Bushehr province and 15km away from Borazjan[7] (BCF Mosque, 23 April 2016).

3.6.2. Architecture of Building

One of the most commonly used shapes in building design is geometry. Forms that can be seen in clearly in every detail, using specific geometric grid network on sidewalks. It flows linearly and constant to lemon and orange trees.

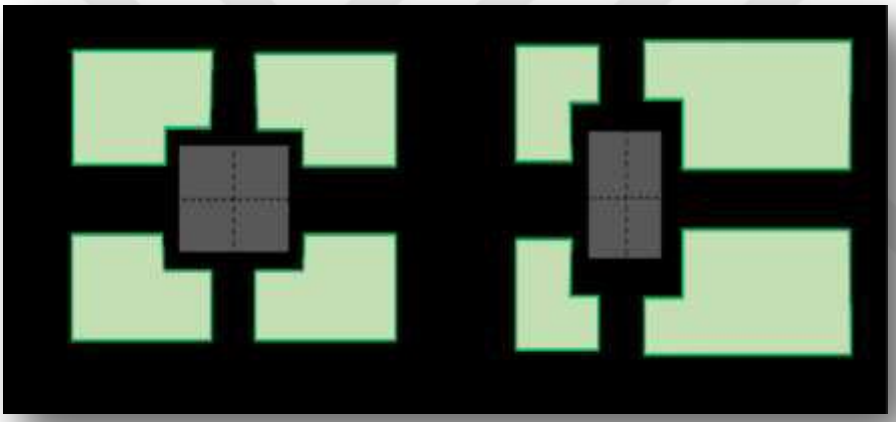

Figure 3.36. Fin Garden with view to four directions. Kashan, Iran. (Photo by: Jakub Jerabek)

Awards

Nomination for the design and construction of “Bushehr Cement Plant Mosque” Among 378 candidates - Aga Khan International Award 2004

Honorable mention in Me'mar Grand Award – 2006.

[7] Borazjan is a city found in Bushehr, Iran. It is located 29.27 latitude and 51.22 longitudes and it is situated at elevation 70 meters above sea level. (Where Is Borazjan, Iran, 2015)

3.6.3. Concept

The main concept employed in the architecture of the building is Islamic and Iranian architecture. According to previously plantation about Persian gardens, we can see that the mosque here is located in "Belvedere" (traditional building of the Persian Garden). A big central cubic space represents to “praying hall” impress. It is designed with suggest of the “Kabba” plan (BCF Mosque, 23 April 2016).

Figure 3.37. View of BCF mosque and factory, 2001 - 2003 (Source: caoi.ir)

3.6.4. Space

A central big cubic space works as a “praying hall”. It designed with an impression of “Kabba”. Four rectangular cubic spaces attached to the four sides of central space. both of them that colligate to the north and the south sides are used as entrance halls, the other eastern side space is used as a public utility and the other west side is used as a “speech stage “in the playing hall. The mosque’s symbolic dome has been replaced by four carved concrete skylights on the roof, inspired by traditional “wind capture” .The mosque interior the same skylights, and designed to catch the sunlight and shine it on the prayer stage, provide lighting. The platforms of all around the mosque are covered with wooden pergola as created the “Ivans”. The figure of Four Palm trees that are planted at the four corners of the mosque is responsible the minarets (BCF Mosque, 23 April 2016).

In this case Use the essential means and concepts of Islamic and Iranian architecture and attempted to create a new visage for the mosque and changing the people's traditional imagination with Create a new description with a new function for "symbolic elements of the mosque" (such as Dome, Minaret, etc.) is the objective of design this mosque.

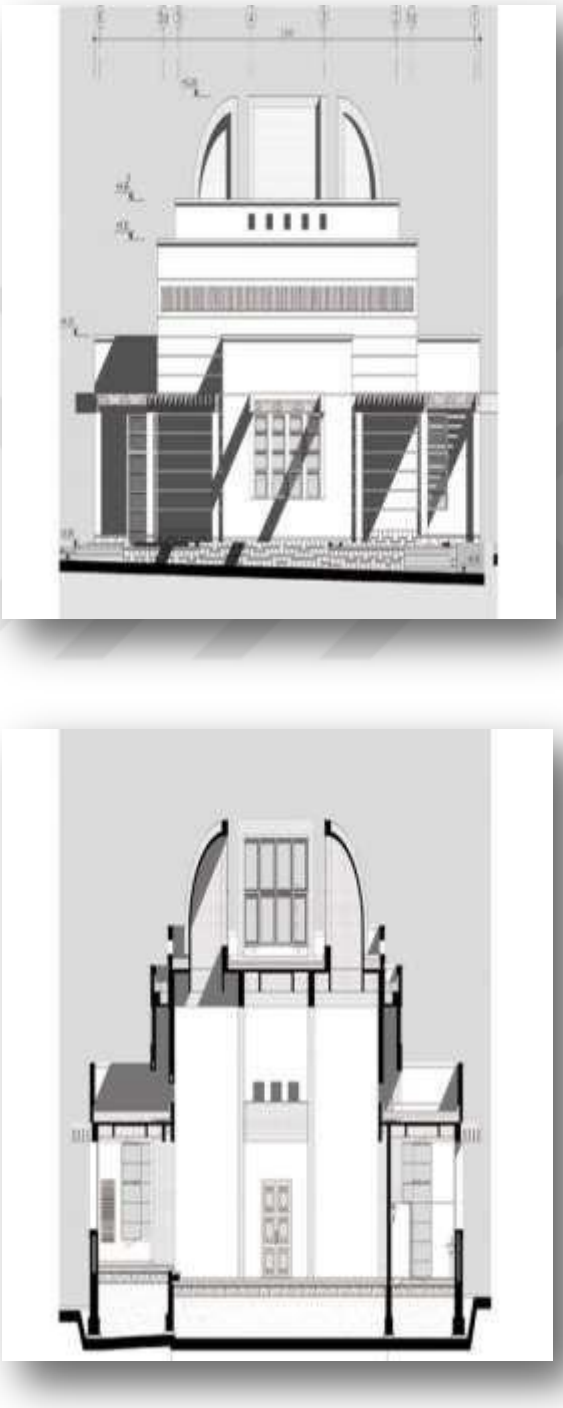

Figure 3.38. Section of building (Source: caoi.ir)

3.6.5. Yard

This mosque is located in the middle of a landscaped, industrial space, in the center of a ground, which is designed as a “Persian Garden” it has a river, lemon, and sour orange trees around it (BCF Mosque, 23 April 2016).

Persian garden:

The design of Persian gardens has been shaped on the meanings, beliefs and symbolic elements of Iranian culture. It argues that culture and public beliefs and values have shaped garden architecture. This architecture is a representation of people’s beliefs and culture (Leila Mahmoudi Farahani, 2016).

3.6.6. Materials

In all of the walls in interiors and exteriors spaces of building, used brick and for the roof and all columns, prefer to choose the concrete. In the floor, we can see marble and finally at the first entrance of the mosque there be marble floor, and line of wooden boards. Concrete framework with concrete slabs is the main component of the building (Erfanian, 23 April 2016).

Relationship between the mosque and the cement factory depends on the use of the “Exposed Concrete Framing” produced by the factory and the use of elements for a decorative ceiling. The design theme of the mosque is to give full regard to “Time and Location” of the project. Therefore, the architectures decided to use local materials, traditional construction skills and labor. The prefect attempted to create a balance between the mosque and its environment (Erfanian, 23 April 2016).

Figure 3.39. Wooden Roof (Source: caoi.i) **Figure 3.40.** Brick Wall (Source: caoi.ir)

3.7. VALI ASR MOSQUE IN TEHRAN, IRAN (UNDER CONSTRUCTION)

Figure 3.41. Vali Asr Mosque in Tehran, Iran (Barry Archive)

3.7.1. Project Information

Location: Tehran

Project year: 2015 – 2008

Area: 22000-m2 Type: Religious

Architecture: Reza Daneshmir under Construction

Vali-e-Asr Mosque is located in one of the busy streets in the capital city of Iran. It has a total area of almost 25,000 square meters and 8 levels (including 4 below ground level and 4 levels situated above the ground). The ground is near the crossroads of one the most important historical/cultural axes in the city and near the ancient theater building. After 23 years, building the mosque there was resolved and the government commissioned the design to Abdul Hamid Noghrekar (figure.3.38).

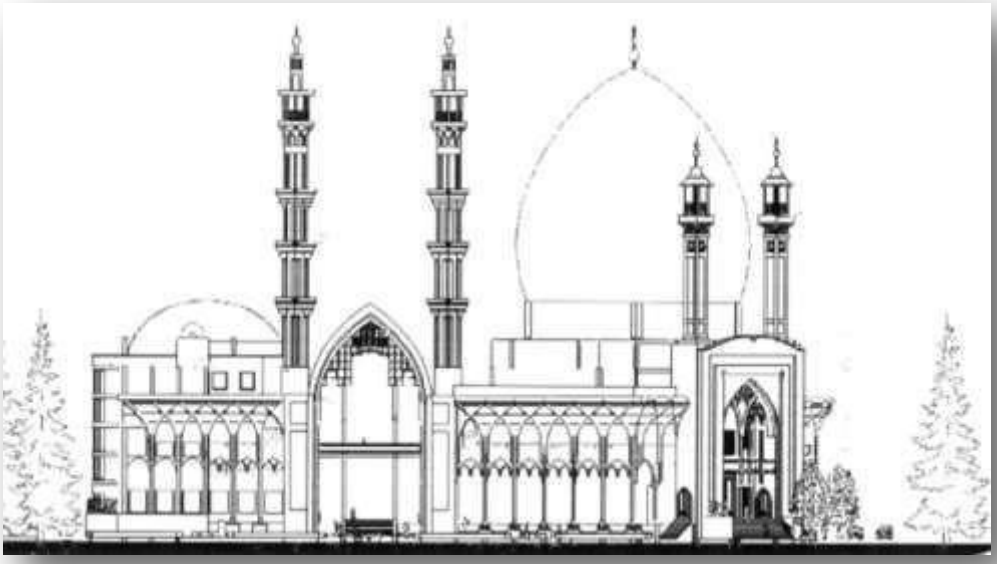

Figure 3.42. First design, north façade, Vail Asr Mosque (Photograph by Iran_eng)

3.7.2. Architecture of Building

As mentioned in the first paragraph, the design was to have coordination and harmony with the theatre and Daneshju Park. The mosque was not to mask the theatre. Therefore, this project was cancelled. The architect was changed to Reza Daneshmir. He was asked to design a new contemporary mosque. As a first decision, he decided to reduce the height to an average of these two buildings (Figure.3.39) (Eco-Architecture, 2016).

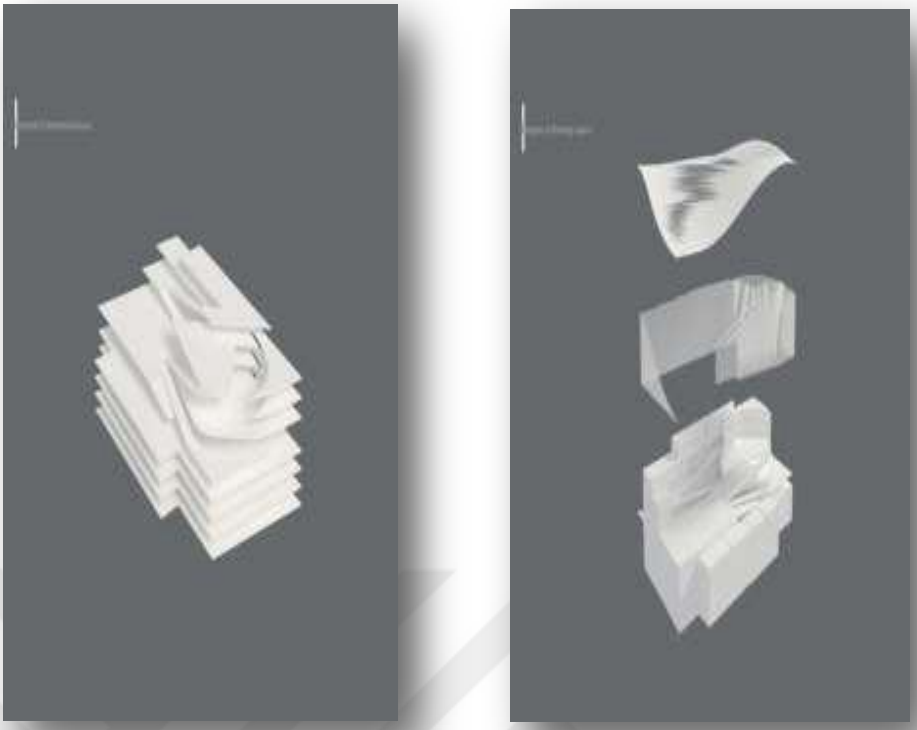

Figure 3.43. Diagram of existing layers (Source: vavstudio)

3.7.3. Concept

A new generation of Iranian architects is following in the trace of a pre-revolutionary avant grade that stud the edge of traditional Persian architecture by using traditional elements in modern designs. From the appearance of the mosque's plan, it is clear that the building of Vali Asr Mosque is the "new" concept of traditional Iranian mosques (Pyruz, 2013).

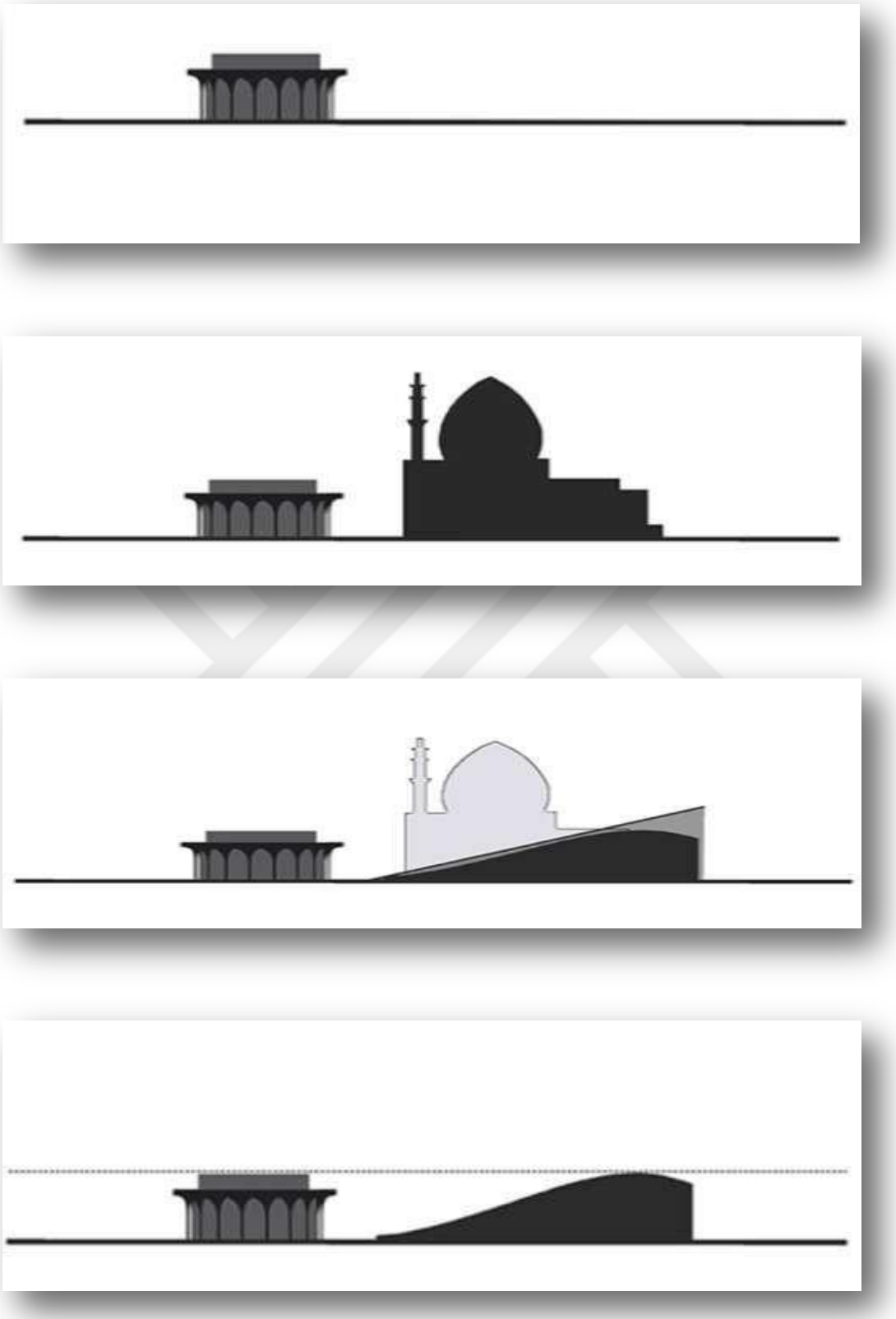

Figure 3.44. .Level of design the Vali Asr mosque (Memar journey)

3.7.4. Space

In its final form, a part of the roof was gibbous and another section of the roof was dished. The second, which connected to top of the structure to the ground. About the sanctum place design at the roof with unique curve forms proposal the memory of a dome and challenges the former description of what a dome should become manifest like. Likewise, all of the main entrance, library, space for ministerial business, education area and other services are in the concave section relative to the functional spaces that are used by the public (Architecture, 2009).

Figure 3.45. .Initial exterior and interior renders of the completed Mosque (Memar journey)

3.7.5. Yard

One of the most significant characteristics of this project is its placement next to the City Theater and Daneshju Park, these two elements, allowed the function of this design to be greater than its area and manages to achieve the needs of the city. because the project is under construction not to find enough information of the detail about the yard and out site space, but probably to existence the Daneshju park that is near the building and the other hand for the reason of limited area the mosque didn't have a big yard (Dehghan, 2017).

Figure 3.46. late stage of construction of the Vali Asr mosque (Memar journey)

Mehran Gharleghi, the director of Studio Integrate in London, said: “The building has been designed carefully to respect the City theatre and coexist with it. Its height is lower than the City theatre; its platforms dissolve into the surrounding plaza, as it gets closer to the City theatre. Its main public platform is also facing the City theatre to allow the visitors to enjoy views towards the theatre.” (Dehghan, 2017).

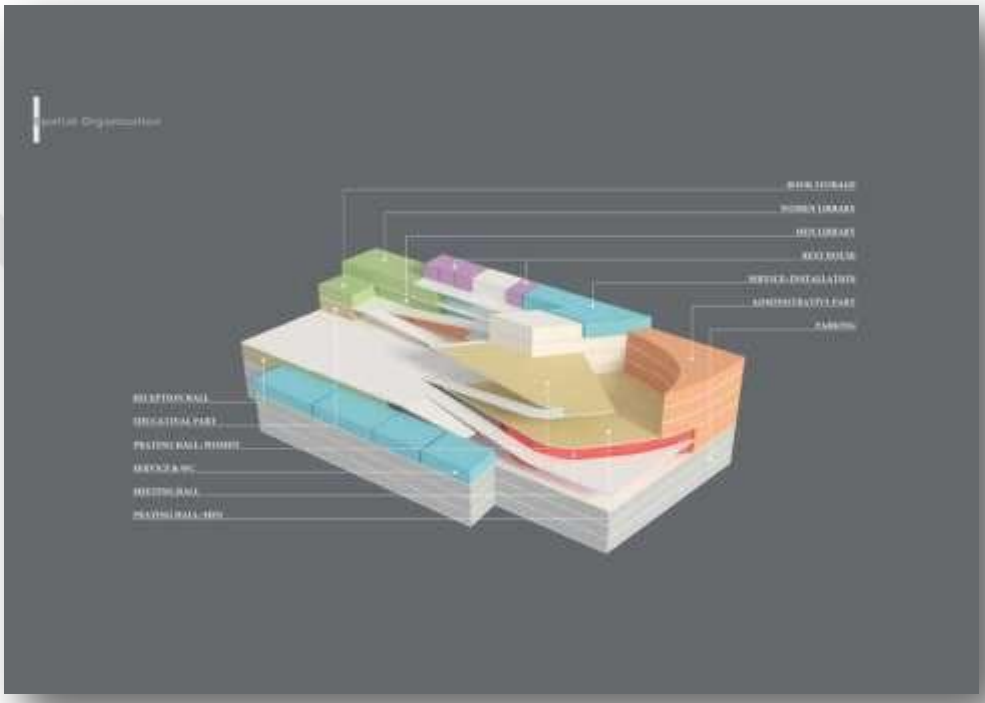

Figure 3.47. Spatial Organization of Vali Asr mosque (Source: fma-co Journal)

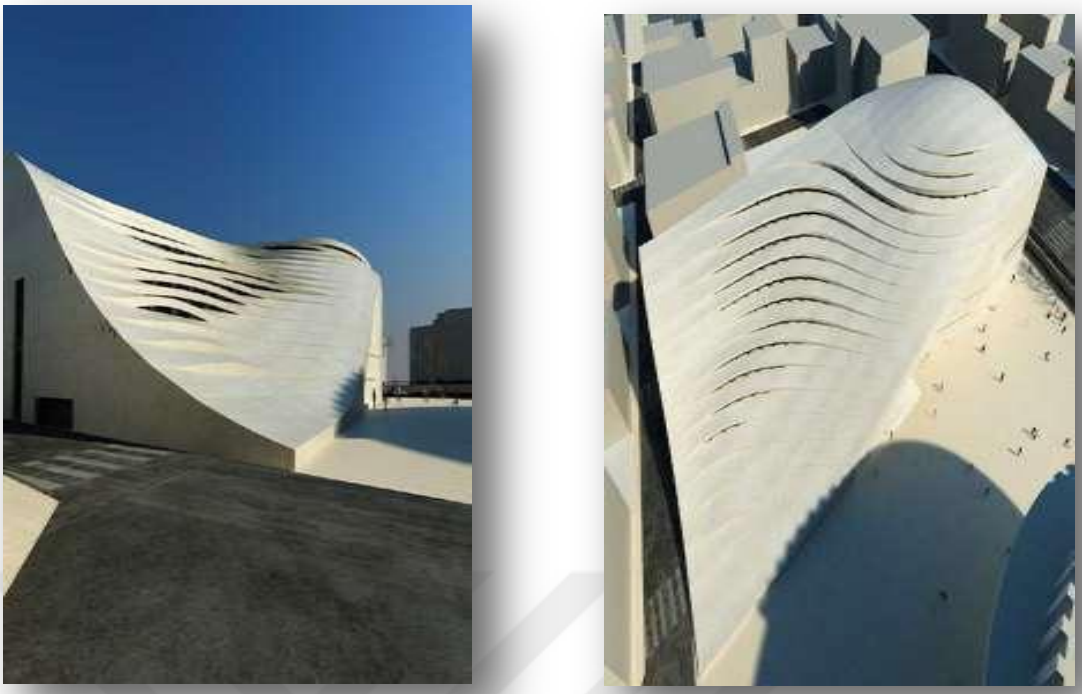

Figure 3.48. *Vali-e-Asr mosque (Source: fma-co Journal)*

Regarding intimately at the Vali Asr mosque typologies, it is naive to see that these contemporary designs without having a dome or minaret, like Emre Arolat Architecture's Sancaklar Mosque in Istanbul, Turkey, which predestinate to break the design intent of the classical Ottoman mosque scheme (Dehghan, 2017).

Pritzker Prize-winning Australian architect Glenn Murcutt completed his first mosque in Melbourne - the mosque is comprised of a series of lantern-like skylights, which are used to remind the result of the minaret or dome (Dehghan, 2017).

Regarding this project can be precisely understood that the government's impact on the prohibition of modern architecture has greatly contributed to preventing the approval of the construction of modern mosques.

With investigating these five contemporary mosque case studies, the result is that due to the traditional mosques being full of the identity in traditional Iranian architecture, the glare of people's ideas and arts has been their time (Architecture, 2009).

In Modern mosques can be more utilization with past structural experiences, new functional techniques, proper physical planning, and determination important design

criteria which play an important role in designing mosques completed qualitative improvement(Architecture,2009).

Specifications of selected five cases study such as the location, minaret, the dome, material and the comprehensive area are mention in below table. In all of the case, minarets are eliminated in modern design, as well as in most of the domes. A new method and construction materials replace with local materials.

Table 3.2. Table of five contemporary mosques in Iran

#	**Mosque Name**	**Location (City)**	**Architecture**	**Date**	**Dome**	**Minaret**	**Material**	**Courtyard**
1	Imam Reza Complex	Tehran	Saeed.R Boreiri	2012	No	No	Bricks, glass, steel	Yes
2	Qods	Tehran	Arash.G Tehrani	2011	No	unfinished minaret	prefabricated steel, transparent concrete	Yes
3	The Mosque & Implementation Religious Rituals	Isfahan	Hamed Fotovvat	2011	Yes	No	firebrick, glass, wood	No
4	BCF	Bushehr	Hamid Erfanian	2003	No	No	Brick, marble, concrete, local materials	Yes
5	Vali Asr	Tehran	Reza Daneshmir	_	No	No	Concrete	No

The major part of mosques is in Tehran that located in capital city of Iran and other ones are in the southern part of the country. According to the table 3.2., mostly date of construction is between 2011-2012 years but the BCF Mosque which winner Aga Khan award and at the same time is the oldest construction in Persian architecture built in 2003.

With the investigation about the style and form of the construction of the building can see the mosque witch use traditional form, the material with the combination of past and modern architecture and in the same time use the principal means and concepts of Islamic and Iranian architecture is more acceptable on behalf of word architecture.

CHAPTER 4
CONCLUSIONS AND FUTURE RESEARCH

To conclude the study, the main goal of this thesis was to analyze both traditional and contemporary mosques in Iran and help improve mosque architecture by giving examples from the contemporary age. In order to draw conclusions about contemporary architecture and their changes, one must have a careful look at the history of mosque construction in Iran. To explain the contemporary mosque architecture, it is necessary to clarify architectural history of traditional mosques because contemporary architecture is based on the roots of Islamic architecture in Iran.

So this thesis started with the history of mosques in Iran and then continued with the analysis of contemporary ones. It can be clearly seen that architects solved most of the functions of the mosque, which the most important one is the religious function. However, what architects did was interpreting the forms of traditional functions and integrating new functions into the design. The mosque has been a very important base for the social and political movements of Muslims. For this reason, considering the mosque as a ritual space is not enough, in contemporary age its function is reduced.

This paper has started with the concept and definition of the term mosque and its construction. Then the history of the mosques has been illustrated. It has been continued by elaboration on the typology of Islamic mosques and explaining the hierarchy of the mosques in the world.so more attention has been given to Iranian architecture.

For this purpose, first, the mosque styles of the pre-Islam and post-Islam periods have been explained along with all details about their construction, materials, and forms, which provide a clear picture about Persian architecture.

One of the important parts of this research belongs to the division of Iranian architecture styles, which casts a deeper glance into the plan, and construction of Islamic mosque and buildings. Evidence for Persian architecture is borne out by research that shows in the table of Iranian architecture before, after and during Islam

(678 bc-1736).this information help to understanding better the structure and circumstance about of all the mosque that described in the other paragraph. These divisions included Four Arched, Porch, Shabestani or Khorasani and the examples, which have been given in each part about these styles, indicate a specific architecture.

The interior characteristics and materials used in mosque's construction have been investigated and compared to the modern architecture and the explanation about the each of the local materials and their use in the mosque architecture gives us another perspective about contemporary architecture and its comparison with ancient period structure.

Explanation about Iranian mosque's elements and their necessity in the construction and foundation of the mosques in another important section in this thesis. By attention to the consideration of the modern mosques, it becomes clear that some of these elements such as dome and minaret have been removed and they have been replaced by the elements, which are for form Islamic style.

This issue has been the subject of discussion among the architects and local people.by the brief examination of the world's contemporary architecture and selecting the mosques that have received prizes from Agha Khan during the years of 1995-2019, can mention two famous architects from Turkey who have made two marvelous mosques, one is Grand National Assembly mosque design by the architect Vedat Dalokay in Ankara and the other one is Faisal mosque design by Behruz and Can Çinici in Pakistan.

By comparison of the style of these two mosques and Iranian BCF mosque which has also been awarded Agha Khan prize, it can be seen that modern architecture by the use of traditional materials and the mixture of the ancient architecture with modern one has constructed one of the most attractive and popular mosque styles.

The integration of these two architecture styles without removing of tradition previous design and combination with the new and modern method and in the same time using native structure can prevent the people form disagreement and rejection of the completely modern mosques such as Sancaklar mosque in Istanbul (Turkey) and Valiasr mosque in Tehran (Iran).

The modernization of the religious powers in the modern world has been accompanied by the modernization of the non-religious functions of the mosque. Besides that, the attitude of the native people towards religious and traditions of mosques and the lack of awareness and acceptance of coordination and compatibility of them with contemporary architecture is the main problem to construct the modern mosques in Iran.

People and local administration desires a mosque building completely traditional and appropriate to the principles of earlier architecture and clearly demonstrate this ideology with disagreement in modern projects. Iranian architects have come up with a solution both to this problem and re-interpretation of the functions in the mosque, and this is clearly visible in the majority of the case studies.

This solution was designed with the creation of diverse and functional spaces adjacent to the main building of the mosque. In Imam Reza complex, by using traditional features as Persian sunken gardens and underground spaces for the public spaces as bookshops and cafes, the architect designed a lively urban space. Similarly, in BCF Mosque, the functions out of main prayer hall as an office building, guesthouse and restaurant are tied with a Persian sunken garden. The architect of the Mosque and Implementation Religious Rituals used transparent and fluid spaces to tie the diverse spaces of the mosque building. And the cross-section of the Vali Asr Mosque includes public spaces as education area, business, and public spaces.

The idea of constructing a scientific and cultural amusement center in these places tract the government agreed to adopt plans, and this was in the interest of architects because at least they could display their contemporary design. Traditional functions of the mosque (which are mostly religious functions) are not same with the contemporary functions of the mosque building complexes. Therefore, it is necessary to understand the acts (religious and non-religious) of the mosque depending on the cultural space of the entire community.

The mosque is an important principle of the urban space in the structure of Iran's cities. For this reason, the mosque is a key element of the Islamic city spaces. The architecture of the mosque can express the spirit of Islamic sanctuary aesthetics. Of course, this pattern of holy space later expanded to the villages and was reconstructing there in a special way. Therefore, it is not surprising that, trying new

forms and designing something different is exciting for an architect on a building like a mosque, which has a strong landmark potential.

By analyzing the traditional and contemporary mosques in this thesis, a comparison was been made between traditional mosques and contemporary ones based on their architectural elements such as minaret, sunken gardens, domes, and materials used. Specifications of selected five cases such as the location, the minaret, the dome, and the total area are summarized in table 2.1. In all of the cases, the minarets have been eliminated from modern designs, as well as most of the domes. New methods and construction materials have replaced local materials and techniques.

As it can be seen from the table, regarding the dome of the Mosque & Implementation Religious Rituals and typologies of Vali Asr Mosque, it is naive to see that these new designs do not have a dome or minaret. There are many examples in other countries too. One of the well-known examples of this kind is Emre Arolat's architecture of Sancaklar Mosque in Istanbul, Turkey, which breaks the design approach of classical Ottoman mosques.

Besides that, there is a Pritzker Prize-winning example of Australian architect Glenn Murcutt completed his first mosque in Melbourne, which does not have exactly dome but a series of lantern-like skylights, which are used in order to remind the minaret or the dome. (Dehghan, 2017). In this thesis, an investigation on form and interpretation of traditional form can be seen such as in BCF Mosque. The dome is deconstructed as skylights, which look like traditional wind catchers.

Besides dome and minaret, some architectural elements are interpreted in contemporary mosques from traditional examples. Sunken gardens and porch are important examples for this interpretation. In Imam Reza Complex and BCF Mosque traditional Persian and sunken gardens are interpreted to include the contemporary design. Also in Oods Mosque, traditional architectural element porch is used to remember the identification of traditional mosques.

When contemporary mosques are analysed from the viewpoint of materials used, the change in their use from the past to contemporary architecture, which have been made by progress, can be seen. These results provide confirmatory evidence that use of steel and various types of wood in the mosque's interior and exterior architecture is one of the developments that cause impressive changes in the appearance of the

buildings. In Imam Reza Complex a lot of calligraphy can be seen all around the walls by using wood and glass, which has the meaning of worship in traditional mosques. As a traditional material brick is widely used in selected contemporary examples with the combination of both local materials and contemporary materials.

Contemporary Iranian mosques reflect the spirit of their time by interpreting the traditional forms of mosques, and the use of modern materials while combining traditional and modern architecture. Although the function of them and existence of some architectural elements have changed during the time, courtyards and sunken gardens are the ones which are still remained. They are formally interpreted as the typology of the Vali Asr Mosque.

In conclusion, despite the fact that Iran is a country with architectural innovations and modern design is commonly used in buildings' structures in a way that the country had been taken several awards, nowadays, the construction of the contemporary mosque and its design in Iran faces several major challenges.

Notwithstanding the construction of a plenty number of mosques in each city and village, only a few modern mosques are observed in the country. In relation to people's attitude towards modern architectural designs of mosques and the approval of the Islamic State, only a few percentages of modern Iranian mosques are built in modern styles.

After investigating these five contemporary mosque cases, it can be seen that beside traditional mosques which are fully identified in traditional Iranian architecture, contemporary mosques besides their acceptance by the public, can be examples for a successful interpreting of traditional forms and architectural elements and. These contemporary examples that interpreted and developed the traditional forms and architectural elements, are adopted both by the public and Local Administration and have won awards. So basically, it can be observed that contemporary designs offer new shapes to traditional forms and transformations in the traditional elements can be seen in contemporary mosques.

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