PalArch's Journal of Archaeology of Egypt / Egyptology

ANALYTICAL TYPOLOGY OF HISTORICAL MOSQUES IN WEST AZERBAIJAN PROVINCE

Nadereh Shojadel
Master of Architecture, Shahid Beheshti University, Faculty Member of the National Cultural Heritage Research Institute, Iran.

Nadereh Shojadel: Analytical typology of historical mosques in West Azerbaijan Province -- Palarch's Journal Of Archaeology Of Egypt/Egyptology 18(4), ISSN 1567-214x

Keywords: mosque architecture, typology, West Azerbaijan

ABSTRACT

West Azerbaijan Province located in the most northwestern part of Iran, with historical richness and old civilization, and ethnic-religious diversity, encompasses various historical temples such as mosque (Masjid), church, and synagogue. This study aims at analyzing the typology of historical mosques of the province. To this end, by identifying and analyzing 20 cases of historical mosques of West Azerbaijan Province, the characteristics of the mosques and their typology of them are introduced and analyzed. The study tends to answer two questions: what spaces the mosques of West Azerbaijan include, and what are their physical characteristics? What are the types of West Azerbaijan mosques? The previous studies and primary analysis of the samples can assume that the pattern of historical mosques of West Azerbaijan Province is a pattern different from historical mosques of Central Plateau of Iran. The purpose of this study is the recognition of case samples and their typology due to architectural spaces and their physical characteristics and introducing the dominant type. The method in this study is descriptive-analytical research. Besides, to evaluate the conceptual framework of the research and to identify the research literature, documentary, and library method is used. Also, a survey is done using field methods for the identification and documentation of studied mosques. According to the results obtained from this study, the columnar nave (Shabistan) is the main space of mosques and is observed in 16 samples in this study. After that, the domed square (Gonbadkhaneh) is the space, which was present in 5 cases of studied samples. Hence, studied historical mosques are divided into two main types of columnar nave mosques and domed square mosques. Each type includes other subsets, which have been divided due to other characteristics, such as the existence or inexistence of courtyard, and type of nave covering. Finally, it could be mentioned that both nave and domes square types have closed volumes, and the majority of them lack courtyard.

INTRODUCTION

In the studies relevant to the typology of Islamic Iranian architecture, the architecture of the northwest of Iran is neglected. The architecture of the Islamic period is mostly recognized in the areas of Iran relevant to central Iran areas. Neglecting other regions of Iran and the areas other than the desert and the plain basin has caused a partial incomplete

understanding of the scholars about the generality of Iranian architecture during the Islamic period (Kahdemzadeh et al. 2016: 104).

Such incomplete understanding has caused deferral of general sentences on Iranian architecture, the validity of which encounters serious doubts in special regions such as mountainous or coastal areas. Mosque as one of the rare uses of the Islamic period is not an exception. Identification of the architecture of cities and the cultural domains constructing monuments far from the dominance of central governments can provide a wide understanding of architectural history (Rapaport, 1969: 1)(quoted from Khademzadeh et al. 2016: 104).

Historical mosques of West Azerbaijan are examples of Islamic architecture of northwest of Iran. The author has selected 20 cases to analyze the combination of physical elements and other characteristics of these monuments. The majority of the samples belong to Qajar Era; although there are some samples of early centuries A.H Seljuk Era, Safavid, and Zand Era.

Research questions

After introducing and analyzing the samples and deriving the typology parameters, the study tends to answer the questions:

- What spaces include in mosques of West Azerbaijan and what are their physical characteristics?
- What types exist in mosques of west Azerbaijan?

The method in this study is descriptive-analytical. Besides, for evaluation and formation of the conceptual framework of the research and to review the literature, documentary and library method is used. For identification and documentation of studied mosques, a survey study is applied by field methods.

Literature review

The studies conducted in the field of this study can be divided into three classes:

a) Multiple studies have been conducted in the field of the typology of architectural works. Some of these studies are used in this study to determine the theoretical framework.

b) The studies subject to mosque typology are:

- Ana analysis of typological parameters of historical mosques of Tabriz (Gholamhossein Memarian, Abbas Ghaffari, Farzaneh Gholizadeh)
- Analytical typology of Kurdistan Mosques (Mohammad Hassan Khademzadeh, Gholamhossein Memarian, and Kamyar salavati)

c) The studies in the field of West Azerbaijan mosques include:

- Mosques of West Azerbaijan Province (West Azerbaijan Iranology Foundation)
- Analysis of the factors affecting the formation of architecture style for mosques in the Qajar Era in Urmia (Mozaffar Abbaszadeh, Atefe Gheisi, and Soda Rezapour)
- Analysis of the impacts of local architecture and folklore in the architecture of mosques in West Azerbaijan and its perspective in the present and future architecture (Omid Mohammadi, and Arash Golabi)

THEORETICAL FRAMEWORK

Mosque:

Hillenbrand defines mosque as follows: masjid (mosque) derived from the root "Sajada" (to prostrate oneself), is used in the Quran itself; though in a rather broad sense, to denote a place of worship (Hillenbrand, 1998: 81).

The mosque is the principal religious building of Islam and paramount among its many functions is communal prayer. In Islamic architecture, with its mysteries, a mosque is the best type of building, for building and maintenance of which Muslims do their best.

Mosque as the most brilliant architectural element of Islam has been along with communities from the early periods of the civil presence of the religion. The mosque is worship, social, and cultural place, which can never be separated from the social and urban structure (Behzadfar, 1997: 11), so the development of the majority of Islamic cites and the hierarchy in them are affected by the central mosque. The importance of a mosque in the old Islamic cities was high, and the term "city" used to be applied just for those cities including great mosques (Zargar, 2007: 58).

Islamic world mosque has played role in the identification of the city and the neighborhoods in addition to playing the principal role as the main place for worship. The place of deployment of the mosque, the physical elements such as dome and finial, and various functions of the mosque have changed the religious building into a public urban space with a unique identity.

Typology literature

As a concept, type refers to a type of a class of people or a group of objects with common characteristics, which can differentiate them from other people or groups of objects. Typology is an effort to place a series of complicated objects in a regular collection to achieve more publicity for recognition and planning (Zaker Haghighi et al. 2009: 106).

The original meaning of typology has been visual. The first criterion presented for typology, on which the majority of experts have consensus, is accommodation. It means that there are many things in common between two objects, but they are not the same (Rabiei, 2013: 9).

Typology is the comparative study of objects in the built environment to divide them into different types. This study can be relevant to physical characteristics or other aspects of objects (Pourmohammadi et al. 2012: 14).

Typology is done based on the nature of the studied samples and based on various factors. For example, in the typology of architectural works as the subject of this study, the typology and classification are done based on scale, function, historical period, geometry, direction, decoration, etc.

There are various instruments for typology. Per study case and typology subject, models, observations, inferential interpretations of the author, inferential analysis of the author, logical inference of author, and software analysis can be used as typology instruments (Memarian, 2017: 46).

The subject is the main factor affecting the typology instrument. The typology subjects can be classified into two general classes of objective and subjective parameters. The objective domain studies the physical factors, and the subjective domain considers the concepts hidden in the work and audiences' understanding of the work (ibid: 46).

Deming and Swaffild believe that typology is the systematic study of types, which is a kind of ranking-based preparation. They believe that studying models, whether historically or biologically or industrially, helps typology of form, structure, order, attachment, materials, and technique of building or any other kind of typology. In their opinion, typology is an effort to classify and sort a range of similar but not same forms and elements. Typological characteristics, the basis on which typology is done, can be various. Identification and description (diagramization) of qualities and characteristics enables the author to define patterns of hierarchical dependence on a different scale, which are focused on designed elements (Deming and Swaffild, 2011: 133).

For classification of studied mosques, typology factors are selected as follows:

1. Typology factors due to existence or inexistence of mosque elements including nave (Shabistan), domed square chamber (Gonbadkhaneh), porch (Dalan), minaret, veranda (Ravaq), cells (Hojorat), courtyard, and roof coating
2. Typology factors due to the architectural characteristics of mosques:
   - Classification of samples based on the general plan form (plan elongation)
   - Classification of samples by size
   - Classification of samples based on the entranceway and direction
   - Classification of samples based on lighting
   - Classification of samples based on applied materials and decorations

Geographical location

West Azerbaijan Province with historical richness, old civilization, and ethnic and religious diversity has located Azerbaijan in the northwest of Iran. The center of the city is Urmia. The climate in this province is mountainous, and ends in the Republic of Azerbaijan from the north, and ends to Turkey and Iraq from the west.

Case studies

To study the historical mosques of West Azerbaijan, for typology, those mosques are selected, the historical fabric of which is preserved. The information provided to identify the case studies includes field and library perceptions of the author. To have maps, the archive of the General Directorate of Cultural Heritage is used.

Table 1: introducing case studies

Row	Name	Antiquity	Location	Row	Name	Antiquity	Location
1	Urmia Great Mosque	Early centuries	Urmia historical	11	Hojjatieh	Qajar	Khoi historical

		A.H to Zand Era	fabric				fabric
2	Sardar	Qajar	Urmia historical fabric	12	Haj Baba	Qajar	Khoi historical fabric
3	Menareh	Qajar	Urmia historical fabric	13	Dash Aghlian	Qajar	Khoi historical fabric
4	Ali Shahid	Qajar	Urmia historical fabric	14	Chures	Safavid	Chures Village, Khoi
5	Haj Abdol Mohammad	Qajar	Urmia historical fabric	15	Tagh	Qajar	Miandoab
6	Bardook	Safavid	Urmia, Somai Baradoost district	16	Mahabad Great Mosque	Safavid	City of Mahabad
7	Motalleb Khan	Lkhani and Qajar	Khoi historical fabric	17	Takab Great Mosque	Qajar	Takab City
8	Seyed ul-Shohada	Zand and Qajar	Khoi historical fabric	18	Alagh Beig	Qajar	Takab, Alagh Beig Village
9	Molla Hassan	Qajar	Khoi historical fabric	19	Bukan Greate Mosque	Qajar	Bukan
10	Sheikh	Qajar	Khoi historical fabric	20	Homamian	Qajar	Bukan, Homamian Village

Overview of case studies

Urmia Great Mosque:

Urmia Great Mosque includes spaces formed around the mosque courtyard in different periods. This mosque enters the line of stonecutters and a line of apothecaries by two entrance gates, forked from the great courtyard. (Over the two decades, a large seminary building is built in the middle of the courtyard, which has distorted the architectural identity of the complex).

The domed square chamber is made in the Seljuk Era compared to similar samples. Space has a square-shaped plan with sides of 10.6m with elephant-shaped corners and changing the foursquare plan to eight and sixteen-square plan. A dome made of brick with an interior height of 16.5m is stood on that. An evident thing of Seljuk architecture characteristics in this building is following four-arched plan pattern, paying attention to the building resistance, and using resistant materials for building (Hatam Gholamali, 2000).

The stucco altar of Urmia Great Mosque with a height of 7.82m and width of 5.48m on the south side of the domed square chamber is the first sample of 23 stucco altars made in the Ilkhani Era. The altar is

implemented on the older altar of the Seljuk Era and in way of continuing the stucco art of that era (Shojadel et al. 2005).

On the west side of the domed square, the nave is built, which is the oldest part of the Urmia Great Mosque. Abu Abdollah Mohammad Bin Ahmad Moghaddasi has said in "Ahsan Al-Taghasim fi Marefat Al-Aghalim" in 45th century AH: "Urmia is beautiful and has an elegant fortress. Its great mosque is in line of mercers and includes a creek". The plan of the nave is a rectangular plan with dimensions of 13*46m. About 18 stone columns have divided this part into three naves in two 9-plan rows. Besides, 30 brick domes are stood on them.

According to the existing inscriptions in the entrance of Chehelsoton, the cells around the courtyard have been built in the early Zand Era by Reza Gholi Khan, the ruler of Urmia in the time of Karim Khan Zand. A large part of the cells around the courtyard has been destroyed over the two decades while building the new seminary.

Sardar Mosque:

The antiquity of this mosque returns to Qajar Era. The founder of the mosque is Deceased Abdol Samad Khan, the father of Agha Khan and the grandfather of Baba Khan Azim Ul-Saltaneh Sardar. Azim Ul-Saltaneh Sardar repaired the mosque comprehensively in 1912. He bought a watch from France and installed it on the entrance (Dehghan, 1967; Kavianpour, 1999).

This mosque is designed by the pattern of nave mosques with arch and dome covering, and with closed volume with the least openings. The mosque includes two naves, one for women and one for men. The principal entrance of the building is embedded in the northeast corner and includes an entrance, entrance space, and anteroom. Access to the nave for men can be possible through this path. The nave for men has a rectangular plan with dimensions of 12*18m with 12 octagonal stone columns in three 4-column rows. 20 small domes made of brick are also embedded on the columns in four-section form. On the west side of the great nave, the nave for women is embedded with dimensions of 9.5*12m with two octagonal stone columns in the middle of the plan. Six small brick domes of four-section form are placed on these columns. The main materials used in the building in the foundation and columns are stones, and other parts are made of brick. The decorations used in the interior view include stone Muqarnas on top of the columns, altar tiling by seven-color tiles with floral and plant motifs. Ayat Al-Korsi is written inside one of the margins around the altar. The date on the altar is 1330A.H, which shows the repairing date. The decorations of the outside facade include tiling and brick working using glazed bricks.

Menareh Mosque:

The antiquity of this mosque returns to Qajar Era. The founders of this mosque have been two khans of Urmia called Haj Yarali Khan and Yadollah khan Nazmi Afshar. The mosque is known because of the existence of a single minaret on the northeast side of the building. This mosque is designed by nave design and wooden column covering. The plan of the mosque on the ground floor includes an entrance and pantry. The

nave in this mosque is a rectangle with dimensions of 10.5*8.5m and four tall wooden columns in the plan, on which wooden ceiling coating is embedded. The materials used in the foundation are stone, and other parts are made of brick and wood. The decorations of the building include wooden column heads of the nave, seven-color tiling in the roof view, and upper parts of the entrance and minaret.

Ali Shahid Mosque:

The antiquity of this mosque dates back to Qajar Era (1790) (1205A.H), and its founder is Ali Shahid, who has made a mosque and a bathroom in his name in this pace. According to narratives, this person was martyred later, and the mosque and bath were called Ali Shahid. On the underground floor, a kahriz is made in 1260A.H (1844). The mosque with a nave design is made of two wooden columns and a wooden ceiling. On the west side of the nave, three nested rooms are existed, which are today being used as nave for women and have a separate entrance. On the west side of the nave, a courtyard exists with a pantry and commercial spaces around it, which has gained the form of a central yard. The main material used in the foundation is stone, and other parts are made of brick and wood.

Haj Abdol Mohammad Mosque:

The antiquity of the building returns to Qajar Era, and the founder has been Haj Abdol Mohammad Nami. The entrance of naves for men and women is embedded in the north side of the building and Husseiniya is made on the first half floor on the south side of the entrance. The main material used in the foundation is stone, and other parts are made of brick and wood. The decorations are limited to stucco muqarnas on the altar.

Bardook Mosque:

The historical complex of Bardook is located northwest of Urmia in the Somai Baradoost neighborhood. The antiquity of the complex returns to the Safavid Era and includes castles, tombs, mosques, and cemeteries. The Bardook Castle Mosque has a rectangular plan, in the middle of which the shape of two rectangular columns of stone is traced. Along with the columns, half-columns are embedded on the east and west walls. On the columns, two cradle arch coatings with basket-handle arch and shaved stone are embedded. Their spaces are filled with rubble and mortar (Sadraei Ali, 2005).

Motalleb Khan Mosque:

The original building of the mosque is attributed to Ilkhani Era; although it is as old as the Qajar Era. The mosque was repaired by Motalleb Khan Zargar Abbas Mirza in 1255A.H (1839) (Pirnia, 1987: 265; Riyahi, 1993: 313). This mosque is formed of a large space with a domed square chamber plan with dimensions of 20m and is unroofed. It seems that the mosque has had a domed roof at the first, which has been destroyed later, and it has been never repaired (Sadraei, 1994: 52). Around this space is covered by two-story cells in the corners of the plan and tall alcoves in the middle of the plan sides. On the front side of the altar, a tall altar exists, the ceiling of which is destroyed. The main material used in the foundation is

stone, and other parts are made of brick. The decorations include coarse stucco muqarnas and the entrance of the domed square chamber, and entrance brick decorations. The mosque has a large courtyard, which lacks the role of a central yard.

Seyed Ul-Shohada Mosque:

The building of this mosque was founded by Ahmad Khan Danbali and Husseingholi Khan completed it. Two schools were predicted on the east and west of the mosque so that the first floor of one school was built. However, the building was never completed because of the collapse of Danbali Dynasty (although the materials were prepared in place). The place became a place to leave garbage until the time that Haji Mirza Yahya (Khoi Friday Prayer Imam) (1317A.H) (1899) and Agha Sheikh Ali Mahalei completed the building and called it Friday Mosque (Riyahi, 1993: 207).

In an inscription embedded at the end of the entrance porch, the date of the building is called "Ya Ghafoor Ya Vadood" (1323A.H) (1905), and the date of the inscription is 1 Ramadan 1327A.H (1909) (Sadraei Khoie Ali, 1994: 126).

Seyed Ul-Shohada Mosque is designed by nave pattern with brick domed covering. The large courtyard is placed on the north side of the nave, and the entrance is located on the west side of the nave. The entrance veranda is a rectangle with dimensions of 17*5.26m, which has access to Enghelab Street from the south and to the Mosque from the north side. Entering the nave is possible from the east side of the entrance veranda. The entrance veranda is covered by three brick domes. The first and the last domes are covered in bowl form and the middle dome is implemented by a three-corner plan. The nave has a rectangular design with dimensions of 15.5*23.9m. Eight stone columns in two four-section rows have divided the plan into three naves. Also, 15 brick domes with the three-cornering plan and elegant brick framing are stood on these columns. The main material used in the foundation and columns is stone, and other parts are made of brick. The decorations include elegant domes framing of the nave and tiling around the altar.

Molla Hassan Mosque:

This mosque was founded by Molla Hassan Bin Abdul Nabi Tasouji, Khoi Friday Prayer Imam, in 1230 A.H (1815) and was repaired in 1879 by Haj Ibrahim Tajer, because it was destroyed by an earthquake (Sadraei Khoie Ali, 1994: 125).

Molla Hassan Mosque is designed by nave pattern by brock dome covering, with closed volume and without courtyard. The building has two naves with dimensions of 16.5*11.5m and 10.2*7.8m. The principal entrance of the mosque is derived from Enghelab Street and arrives at the principal nave by a vestibule domed (Hashti). The other entrance is located on the west side of the nave and ends at the old bazaar. Inside the principal nave, six octagonal stone columns are placed in two three-section rows, and 12 brick domes with elegant framings are embedded on them.

The main material used in the foundation and columns is stone, and other parts are made of brick. The decorations include elegant framing of domes and stone Muqarnas on the top of columns.

Sheikh Mosque:

The antiquity of the building returns to, due to the architectural characteristics and comparing it with similar cases, dates back to Qajar Era. Sheikh Mosque is designed by nave pattern with a brick dome covering and closed volume. The nave is a rectangle with dimensions of 13.7*22m, in the middle of which two octagonal stone columns are embedded, and six brick coverings (each including four sections) are embedded on them. The entrance of the nave is on the northeast side and in front of the altar. The material used in the foundation and column is stone, and other parts are made of brick.

Haj Baba Mosque:

Based on architectural characteristics, the antiquity of the building dates back to the Qajar Era. Haj Baba Mosque is designed by nave pattern and includes two naves for men and women. The nave for men has a rectangular plan with dimensions of 19.5*13.5m. Six rounded columns made of brick are embedded in the middle of the nave in two rows with three sections per row. 12 brick domes with the three-cornering design are embedded on them. The nave for women has a rectangular plan with dimensions of 9.5*7m, and two rounded brick columns and six brick domes with a three-cornering design make the ceiling. Two entrances are placed on the north side and can have access to naves of men and women, and the courtyard by two entrance porches. The courtyard is located on the east side of the nave for men. On the south side of the courtyard, a semi-roofed nave is built for summer by wooden columns and ceiling. The material used in the foundation and columns is stone, and other parts are made of brick.

Hojjatieh Mosque:

The Hojjatieh Mosque with the antiquity of the Qajar Era is designed by nave pattern, with arch covering and brick dome with closed volume and least openings. The nave has a squared design with dimensions of 15m. A minaret with a diameter of 3m and a height of 12m is embedded on the northeast side of that.

In the middle of the plan, four octagonal columns are placed, and a central dome (brick working in the part of converting the square to circle and 12-point star working in the lower space of the dome) and eight bowl-shaped domes are embedded on the mentioned columns. The courtyard and newly attached space, and the entrance veranda are located on the west side of the nave. The main material used in the foundation and columns is stone and other parts are made of brick. The decorations include beautiful covering domes and altar tiling including two rows of inscriptions decorated by Quran verses by sols font and Arabic designs of flowers and plants, and the elegant stucco works are evident on top of the altar.

Dash Aghlian Mosque:

The antiquity of this building, based on architectural characteristics and comparing it with similar cases returns to the Qajar Era. The appellation of the name of this building is because of the existence of a stone inside the courtyard. Some local people believe that a red-shaped

liquid comes out of the stone in the Ashura & Tasua days (the term "Dash Aghlian" means crying stone in Turkish).

Dash Aghlian Masque is designed by nave pattern with a wooden covering of the bed and porch with wooden columns arriving at the courtyard. The principal entrance with brick decorations is located on the northwest side of the plan and enables access to the courtyard. Another entrance is also placed on the north side of the courtyard. On the south side of the courtyard, a porch with two wooden columns and two wooden half-columns are embedded in two sides and form the view of the mosque using flat wooden covering. Entering the principal nave (nave for men) is possible through this porch. The nave for men is a square with the dimensions of 8.8m covered by wood (wooden truss).

The nave for women is located on the east side of the nave and the ceiling is covered by beam and cross arch (wicker brickwork), and the interior views are reconstructed by brick. On the east side of the courtyard, renovation spaces with service uses are placed. The main material used in the foundation and plinth of the building is stone, and other parts are made of brick and wood. The decorations include porch façade bricks and interior facades of the courtyard and the principal entrance, the tiling decorations of the altar of the nave for men by seven-color tiles on the azure background.

Chures Mosque:

With the destructions made by Ottomans in Khoi in the time of Shah Tahmasb, the city had lost its value and importance, and centrality was transferred to Chures (Alam Ara Abbasi, 2003: vol.2, 131).

The antiquity of the mosque and many other historical monuments of Chures Village dates back to Safavid Era. This mosque was built by Morteza Gholi Khan Danbali in 11th A.H, the time that Khoi was destroyed by the Ottomans, and the government and the people were transferred to Chures. Eshtehardi says about this mosque: "excellent architecture is implemented in the mosque and Aqsa Mosque is founded in the Chures neighborhood, and several endowments were placed there because of the mosque, and now this region is alive and prospered" (Sadraei Khoie Ali, 1994: 122).

Chures Red Mosque is designed based on a nave mosque with a domed covering, without courtyard, and with closed volume. The mosque has a square plan with dimensions of 15m, and the dome is covered by brick with a three-cornering design on four hexagonal stone columns and simple column heads.

The simple entrance of the mosque is embedded on the northeast side of the plan (in front of the altar). The altar is designed by two façade arches without stucco, muqarnas, and any other decorations. The outside façade of the mosque includes simple brick arches. The main material used in the foundation and plinth is stone, and other parts are made of brick.

Tagh Mosque:

The antiquity of this monument dates back to the Qajar Era based on the architectural characteristics and comparing with similar cases. The building is attributed to Ahmad Khan Biglar Beigi, the son in law of Fath'ali Shah Qajar.

The building is designed by the nave pattern with an arch and brick dome. The building has a square plan with dimensions of 17m, and four brick columns in form of the square are embedded in the middle of the plan. Besides, nine brick domes are stood on them. The materials used for the foundation and plinth include stone and brick.

Mahabad Great Mosque:

Mahabad Great Mosque was built in the time of Shah Abbas Safavid I by Sultan Bin Shir Khan Bin Sheikh Heidar Khan Makri, deceased in 1012A.H (1603). At the time of Shah Suleiman Safavid, a school was built on the north side of the mosque. The completion date of the mosque is 1089A.H (1678) due to the inscription on the entrance. Mohammad Hassan Khan Sani Ul-Doleh has written in "Mer'at Al-Baladan Naseri" on Savejbelagh Great Mosque (Mahabad): "Mahabad great mosque is one of the buildings built by Bodagh Sultan Bin Shirkhan Bin Heidar Khan Makri, governing the Makri, Savejbelagh, and others".

The initial plan of Mahabad Great Mosque is implemented by nave pattern and dome covering, and closed volume with a small courtyard on the east side of the nave. The nave plan of the mosque (the initial plan of the building) is a rectangle with dimensions of 27*14m. Ten octagonal stone columns are embedded in the middle of the plan. 18 brick covering domes are stood on the columns. The domes of the middle domes with three-cornering plans and domes of two naves are implemented in a bowl-shaped plan.

The current courtyard and the religious sciences were added to the plan in the time of Shah Sultan Safavid. At present, the plan of the complex includes a central yard and nave on the south side and cells on the other three sides, and a new nave on the north side of the complex.

Takab Great Mosque:

According to the inscription on the entrance of the mosque, this mosque was built in 1332A.H (1914). The building was founded following the order of Hosseinali Khan Afshar at the time of the kingdom of Naseredin Shah Qajar, and at the same time with Alagh Beig Mosque, Takab.

Takab Great Mosque has a rectangular plan with dimensions of 24*17m, which includes a domed square chamber with a cross plan. Four rectangular rooms are placed in four corners of the principal space. The coverage of the central part of the ceiling is a brick dome, and four cross sides of the cradle arch are covered by a gateway arch. The rooms placed in four corners of the plan have an entrance from the principal space, and three of them have an entrance to the courtyard. The ceilings of rooms are covered by cradle arch. On the east side of the plan, a porch is placed with six rounded brick columns and a cross arch covering. On the north side of the plan, a new nave is embedded. The courtyard is placed on the east side of the nave. This porch has access to the courtyard and a principal entrance, and two other entrances have access to the building from this porch.

The main material used in the foundation is stone and other parts are made of brick. The decorations of the building include elegant brickworks

beneath the dome, altar, east, west, and north sides of the cross plan. The variety of brickworks on the east side is also eye-catching.

Bukan Great Mosque:

The antiquity of Bukan Great Mosque dates back to 1310 A.H (1892) by Seifedin Khan Sardar Makri, and the architect of the building is Ali Isfahani.

Seifedin Khan Sardar Makri was the son of Chief General Aziz Khan, who was born in 1280A.H (1863). After the death of Sardar Aziz Khan, he was appointed as ruler of Makri Savejbelagh by Naseredin Shah when he was seven years old. Bukan Great Mosque is one of the historical monuments, and the tall castle of Bukan called Sardar Castle and Bukan Great Pond are elegant works of this famous man. The tomb of Seifedin Khan is in the monument of Seyed Hamzeh Tabriz and next to the tomb of his father, Aziz Khan Makri (Afkhami Ebrahim, 1997: 176).

The original building of Bukan Great Mosque has a rectangular plan with six carved stone columns and 12 brick domes. In the development in 1345 A.H (1926), three metal columns with cement covering and four covering domes were added to the plan. Finally, after the Islamic Revolution, the development was taken on the west side of the mosque, and the building has 39 columns and 53 covering domes.

Alagh Beig Takab Village Great Mosque

The antiquity of this building dates back to 1332 A.H (1914) and is built at the same time as Takab Great Mosque. The founder of this monument is Eftekhar ul-Molk Afshar, one of the local lords of that region. The principal space of the mosque has crossed plan with dimensions of 12*12m with dome coverage. On the south side, a porch with four rounded brick columns and a crossed porch ceiling with access to the courtyard are embedded. In later periods, two spaces were attached on the east and west side in two stories. The entrance of the mosque includes an entrance head and an entrance porch with a cradle porch with a gateway arch, which has access to the courtyard. The main material used in the building is brick, and the decorations include beautiful brick-works on the entrance, the brick-works on the south side porch, the façade porches of courtyard walls, and the works beneath the principal dome.

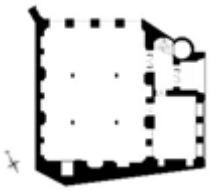
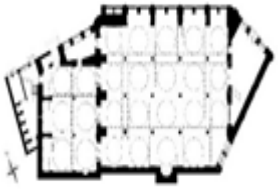
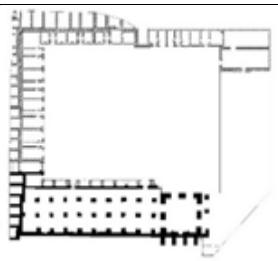
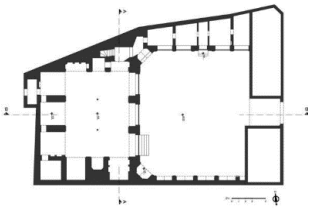
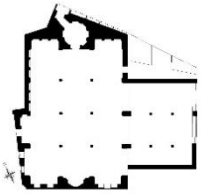
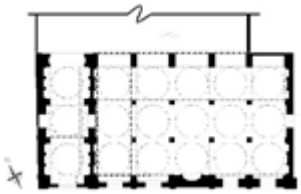
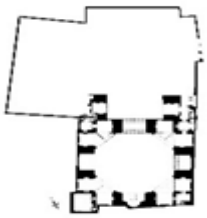
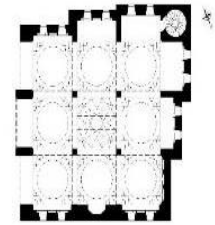
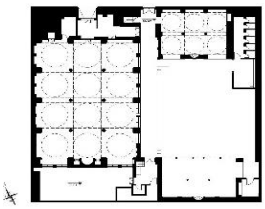
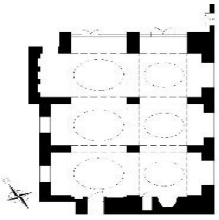
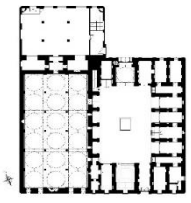
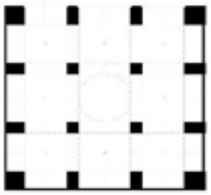
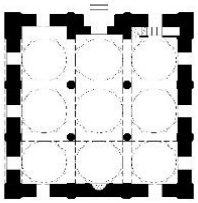
Homamian Mosque:

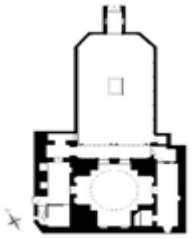
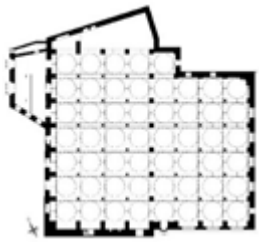
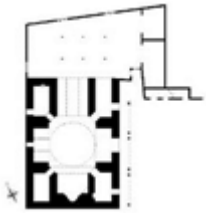
Homamian Mosque was built in 1328 A.H (1910). The founder of this mosque is the deceased Mahmoud Agha Ilkhani Zadeh, and the architect of the monument is Memarbashi Maraghei.

Homamian Mosque has a plan with a domed square chamber pattern with dimensions of 14.5m with porch coverage and bowl-shaped dome. In the interior facades of the north, east and west side, porches with various brick-works are evident. On the north side, a porch exists with columns and a wooden ceiling. Over the years, instead of this element, a porch with five rounded brick columns, a crossed ceiling, and porches with Gothic arch is implemented. On the east side of the domed square chamber, a seminary is attached to the plan on 1.5 floors. On the east side, a bathhouse with columns and a wooden ceiling is embedded. Currently, entering the domed

square chamber is possible through this space. The materials used in building include stone, brick, and wood.

Table 2: (the plan of studied samples) (in all plans, the upper part of the page is the northeast direction)

 Menareh Mosque	 Sardar Mosque	 Urmia Great Mosque
 Bardook Mosque	 Haj Abdol Mohammad Mosque	 Ali Shahid Mosque
 Molla Hassan Mosque	 Seyed ul-Shohada Mosque	 Motalleb khan
 Hojjatieh Mosque	 Haj Baba Mosque	 Shiekh Mosque
 Mahabad Great Mosque	 Tagh Mosque	 Chures Mosque

 Alagh Beig Mosque	 Bukan Great Mosque	 Takab Great Mosque

RESULT ANALYSIS

1- Analysis of the studied samples and analysis of the first-order factors due to the existence or inexistence of elements of studied mosques

The elements and spaces observed in studied cases are as follows:

Shabistan (nave): in the historical mosques of West Azerbaijan Province, the principal space defining the nature of the mosques can be the nave. 16 cases of studied samples including nave are: Urmia Great Mosque, Sardar Mosque, Menareh Mosque, Ali Shahid Mosque, Haj Abdol Mohammad Mosque, Bardook Mosque, Seyed Ul-Shohada Mosque, Molla Hassan Mosque, Sheikh Mosque, Haj Baba Mosque, Hojjatieh Mosque, Dash Aghlian Mosque, Chures Mosque, Tagh Mosque, Mahabad Great Mosque, and Bukan Great Mosque

Domed square chamber: with the advent of Islam in Iran, Sassanid architectural traditions were forgotten for a while and simple nave mosques were changed into the dominant plan. However, in the early years, the Sassanid penthouse was not faded completely and continued its life as a pattern for small-scale mosques. Poop refers to three types of mosques for the early post-Islam centuries: nave type, single-porch, and four-arch types (Hojjat et al. 2014: 21).

Among the studied cases in this study, four cases include domed square chamber space: Motalleb Khan Mosque, Takab Great Mosque, Alagh Beig Mosque, and Homamian Mosque

Minaret: among 20 studied mosques, only three cases have minarets. The three cases have a nave plan and there is no minaret in the mosques with a domed square chamber plan. The three mosques include Hojjatieh Mosque, Menareh Mosque, and Mahabad Great Mosque. The presence of minaret in mosques was not common. The Menareh Mosque in Urmia is called under this name just because it includes this element (minaret).

Porch: the porch is a corridor-shaped space to have access to the principal space of the mosque (nave or domed square chamber). This element was observed only in two cases including Seyed Ul-Shohada and Mahabad Great Mosques.

Veranda: if porch has been an underlying element in mosques of other regions of Iran as a space to enter the principal space; this role is played by veranda in the mosques of West Azerbaijan in a few cases. The veranda was observed in four cases including Homamian Mosque, Alagh Beig Mosque, Takab Great Mosque, and Dash Aghlian Mosque.

Cells: the existence of cells for students in mosques of the statistical population was not one of the dominant spaces, and was observed just in Urmia Great Mosque, and Mahabad Great Mosque. In Urmia Great Mosque and Mahabad Great Mosque, cells were embedded in historical periods around the central yard. In Motalleb Khan Mosque, the cells were embedded in the space around the domed square chamber in two stories.

The factors of this group due to the existence of the inexistence of elements of studied mosques are presented in table 3.

Table 3: analysis of the cases based on existing architectural elements

Name	Nave	Domed square	Front Porch	Minaret	Porch	Veranda	Cells	Courtyard		Ceiling	
								Courtyard as central yard	Courtyard (not central yard)	Arch and dome	Wooden flat
Urmia Great Mosque	*	*	-	-	*	-	*	*	-	*	-
Sardar	*	-	-	-	-	-	-	-	-	*	-
Menareh	*	-	-	*	-	-	-	-	-	-	*
Ali Shahid	*	-	-	-	-	-	-	*	-	-	*
Haj Abdol Mohammad	*	-	-	-	-	-	-	-	-	-	*
Bardook	*	-	-	-	-	-	-	-	-	*	-
Motalleb Khan	-	*	-	-	*	-	*	-	*	-	-
Seyed Ul-Shohada	*	-	*	-	-	-	-	-	*	*	-
Molla Hassan	*	-	-	-	-	-	-	-	-	*	-
Sheikh	*	-	-	-	-	-	-	-	-	*	-
Haj Baba	*	-	-	-	-	-	-	*	-	*	*
Hojjatieh	*	*	-	*	-	-	-	-	-	*	-
Dash Aghlian	*	-	-	-	-	*	-	-	*	-	*
Chures	*	-	-	-	-	-	-	-	-	*	-
Tagh	*	-	-	-	-	-	-	-	*	*	-
Mahabad Great Mosque	*	-	-	-	*	-	*	*	-	*	-
Takab Great Mosque	-	*	-	-	-	*	-	-	*	*	-
Bukan Great Mosque	*	-	-	-	-	-	-	-	-	*	-
Alagh Beig	-	*	*	-	-	*	-	-	*	*	-
Homamian	-	*	-	-	-	*	-	-	-	*	-

According to table 3, due to the existence of inexistence of elements inserted in the table in studied cases, it could be found that the columnar nave is one of the main spaces in samples, and was existed in 16 cases. The second underlying space used in these cases was a domed square chamber, which was existed in five cases. In four cases, the domed square chamber was the only space for saying prayers. The existence of both nave and domed square chamber elements was observed only in Urmia Great Mosque. This is because; the initial core of the mosque is the nave, which

dates back to early centuries A.H. Also, the domed square chamber was attached in the Seljuk Era same as lots of cases in Iran (Fari, 2016).

Accordingly, the mosques of West Azerbaijan can be divided into two general groups of nave mosques and domed square mosques.

Nave mosques: as it was mentioned, 16 studied cases included the nave and can be classified in the nave group. 11 out of nave mosques had a plan with stone or brick columns with arched covering and brick domes. These mosques are the most common plans of historical mosques of the province: Urmia Great Mosque, Sardar, Ali Shahid, Haj Abdol Mohammad, Bardook, Seyed Ul-Shohada, Molla Hassan, Sheikh, Haj Baba, Hojjatieh, Dash Aghlian, Chures, Tagh, Mahabad Great Mosque, and Bukan Great Mosque. In terms of geographical distribution, the majority of these plans are located in the City of Khoi.

Three cases of nave mosques included wooden beams and wooden ceilings: Menareh, Ali Shahid, and Haj Abdol Mohammad. All of these cases are located in Urmia. As there are other cases of this plan in Urmia (not studied here), it seems that this plan is the dominant plan of historical mosques of Urmia.

Finally, Bardook mosque in this group had arched coverage and stone domes. Dash Aghlian Mosque lacks columns and the ceiling is made of wooden truss, which has been probably columnar in historical ages. In other cases, the columnar nave was the main element and space for the mosques.

The studied nave mosques can be divided into two groups in terms of existence or lack of yard. 10 out of 16 nave mosques had a yard in their plan, and six cases lacked a yard. From the mosques with a yard, four cases including Urmia Great Mosque, Mahabad Great Mosque, Ali Shahid Mosque, and Haj Baba Mosque included central yard, and other mosques had yard just as a space for lighting and as an accessible place. This can refer to the secondary role of the yard in the spatial organization of the studied mosques. Even in four cases with a central yard, the yard was formed during historical ages and this element can't play a key role in the overall plan structure.

Domed square mosques: as it was mentioned, Motalleb Khan Mosque with a four-arch plan lacks dome coverage and is a unique example of unroofed mosques. This can be because of the impossibility of completing the ceiling in time of construction or destruction of the dome in the next periods. The other three cases had brick domes.

Domed square mosques, same as nave mosques, can be divided into two groups of mosques with and without a yard. However, the yard never plays a key role even in those mosques with a yard. In this study, Takab Great Mosque, Alagh Beig, and Motalleb Kahn Mosques included yard in their plan and Homamian had no yard.

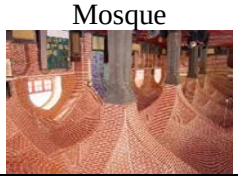
2- Analysis of the cases and analysis of the first-order factors due to architectural characteristics of mosques:

1-2- classification of samples based on overall plan form (plan elongation)

The studied mosques can be classified into three groups due to the plan elongation. The studied samples had a squared plan (or close to

square) or rectangular square. The rectangular squared samples included two groups: they had whether longitudinal elongation and were designed in the direction of qibla or perpendicular to the qibla. In these groups, those with elongation in the direction of qibla have the best mode in terms of perception and vision of the prayers.

Table 4: classification of samples based on overall plan form

Overall plan form	Mosques in this group	Example Image
Square	Motalleb Khan, Hojjatieh, Chures, Tagh, Takab, Alagh Beig, Homamian, Dash Aghlian	Hojjatieh Mosque 
Rectangular square with elongation in qibla direction	Menareh, Ali Shahid, Molla Hassan, Sheikh, Haj Baba, Mahabad Great Mosque	Sheikh Mosque 
Rectangular square with elongation in qibla direction	Urmia Great Mosque, Sardar, Bardook, Seyed Ul-Shohada, Bukan Great Mosque	Seyed Ul_shohada Mosque 

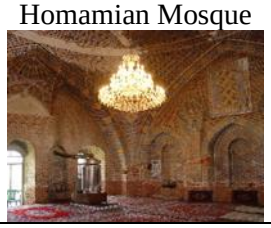
-in the nave mosques with central yard, and in those with more than one nave, this element (nave) has been the main criterion for the classification.

2-2- classification of samples by size

The studied cases were classified into three large, medium, and small groups in terms of size. The criterion for size was dimensions of the nave or domed square plan (based on the type), and volume and height was not a criterion in this classification. In cases such as Urmia Great Mosque including both nave and domed square chamber, the sum of the areas of both elements is considered as a criterion. Also, in cases with more than one nave, the sum of areas of naves is considered. At the first, the author aimed at considering the size of plans for nave mosques due to the number of modulations of naves. However, classification was done based on the area, because the size of modulations in samples was significantly different in some cases. The mosques with an area less than 200m^2 were small; mosques with an area of 200-300m^2 were medium, and those with an area more than 300m^2 were large samples (for the mosques developed in contemporary age; the area of historical limit was considered).

Table 5: classification of samples by size

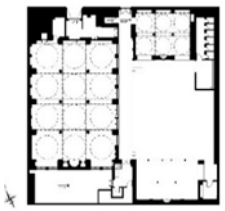
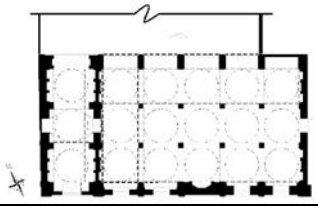
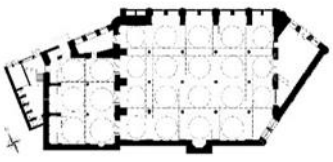
Size	Name of mosques in this group	Example image
Large	Urmia Great Mosque, Sardar, Seyed Ul-Shohada, Motalleb Khan, Mahabad	Urmia Great Mosque

	Great Mosque, Takab Great Mosque, Bukan Great Mosque, and Haj Baba Mosque	
Medium	Sheikh, Hojjatieh, Dash Aghlian, Chures, Tagh, Homamian	Homamian Mosque 
Small	Menareh, Ali Shahid, Haj Abdol Mohammad, Bardook, Molla Hassan, Alagh Beig	Menareh Mosque 

3-2- classification of samples based on entrance direction

The way of entering the principal space is significant in terms of extension and the resulting attractiveness. This item can be underlying in sense of place. Those samples with the entrance in direction of qibla are less focused and can make the least spiritual senses. Traffic of prayers can disrupt the mind of users, and it could be mentioned that mosques with entrances in front of qibla (back to the prayers) are more successful than others (Memarian, 2017: 59).

Table 6: classification of samples based on the entranceway and direction

Entrance side	Name of mosques	Example plan
North (back to prayers)	Urmia Great Mosque, Ali Shahid, Haj Abdol Mohammad, Motalleb Khan, Molla Hassan (in two north and west directions), Sheikh, Haj Baba, Dash Aghlian, Chures, Tagh	Haj Baba Mosque 
West	Bardook, Seyed Ul-shohada, Hojjatieh, Bukan Great Mosque, Homamian, Alagh Beig (in both east and west directions), Molla Hassan (in both north and west directions)	Seyed Ul-shohada Mosque 
East	Sardar, Menareh, Mahabad Great Mosque, Takab Great Mosque, Alagh Beig (in both east and west directions)	Sardar Mosque 

4-2- classification of samples based on lighting way

Because of the cold climate of the study area, roof lighting is not used for lighting in the spaces. The majority of lightings in all cases are openings with small dimensions in the exterior wall. In samples with central dome such as Takab Great Mosque and Alagh Beig Mosque, small skylights are embedded in the central dome stem.

Figure 1: Homamian Mosque (openings)

Figure 2: Takab Great Mosque (openings)

Figure 3: Sardar Mosque (openings)

5-2- classification of samples based on applied materials and decorations

Due to the climate, the material used in the foundation and plinth in all studied cases was stone. In other parts of the samples, the main type of materials used, and the decorations are presented in table 7.

Table 7: classification of samples based on materials and decorations

Mosque name	Main materials used	Decorations
Urmia Great Mosque	Brick	Ilkhani Stucco for the altar, domed square inscriptions, plaster muqarnas, and tiling of entrance porch to nave
Sardar	Brick and stone	Stone muqarnas on column heads, altar tiling, tiling, and brickworks of façade
Menareh	Brick and wood	Wooden column heads, seven-color tiling, façade tiling
Ali Shahid	Brick and wood	-
Haj Abdol Mohammad	Brick and wood	Plaster muqarnas for altar
Bardook	Stone	-
Motalleb Khan	brick	Plaster muqarnas of altar and entrance of the domed square chamber, brick façade
Seyed Ul-shohada	Brick	Covering domes, altar tiling
Molla Hassan	Brick and stone	Covering domes, stone muqarnas on column heads
Sheikh	Brick and stone	Plaster muqarnas of the altar
Haj Baba	Brick, stone, and wood	-
Hojjatieh	Brick and stone	Covering domes, plaster framing, and altar tiling
Dash Aghlian	Brick and wood	Brickworks of courtyard façade, altar tiling
Chures	Brick and stone	-
Tagh	Brick	Covering domes
Mahabad Great Mosque	Brick and stone	Stone column heads of the nave
Takab Great Mosque	Brick	Domed square chamber decorations, brick working on the east side veranda
Bukan Great Mosque	Brick and stone	-
Alagh Beig	Brick and stone	Domed square works, brick façade, entrance, and north side veranda
Homamian	Brick and wood	Domed square chamber, brick façade

CONCLUSION

According to the analysis taken in this study, it could be found that the mosques of West Azerbaijan include two main types of the nave and domed square mosques. The nave columnar mosques form a major part of the population in this study and can be the main plan and pattern of historical mosques in Azerbaijan. In these mosques, except for four cases with squared nave, other samples used a rectangular plan form. Among these cases, plan elongation was in direction of qibla in six cases and was perpendicular to the direction of qibla in five cases. The nave entrance direction was mostly on the north side (back to the prayers), which is a good direction.

In the studied cases of nave plan, other elements are sometimes formed around the nave and have extended the plan of a single nave, and nave sometimes has been the only element of the mosque, such as Bardook Mosque. Among the elements formed around the nave including minaret, porch, veranda, and cells, no element was common in the historical mosques of West Azerbaijan, and they can't be involved in the typology.

Columnar nave mosques, in terms of ceiling coverage, were divided into two types of mosques with stone or brick columns with arch and dome covering, and the mosques with wooden columns and wooden ceiling. The second type has been the dominant pattern of mosques of Urmia, the center of West Azerbaijan. Columnar nave mosques are divided into two types of mosques with and without yard in terms of the presence of yard. In those mosques with yards, the yard never plays a principal role in the plan form.

The second type of historical mosques has been a mosque with a domed square chamber plan. These mosques have a plan with four-arch and domed ceilings. Although the plan includes one-fifth of cases in this study, it is an elegant pattern, which is rooted in old history. The pattern includes two types of mosques with and without yard too.

Finally, it could be mentioned that both types of nave and domed square mosques are plans with closed volumes with no correlation to the yard. In terms of lighting, both types used to get light from the outside walls. Also, the cold climate of the region requires limited numbers and dimensions of openings. In domed square mosques, there are multiple skylights in the dome stem.

The main material used in the foundation of both types was stone, and other parts were made of brick. In the samples with columns and wooden ceiling, wood has been used as a material. In terms of decorations, among 20 cases, only Urmia Great Mosque includes brilliant decorations including Ilkhani stucco for the altar and inscriptions of the domed square chamber. In other cases, decorations included coarse plaster muqarnas in the altar, seven-color tiling, stone muqarnas on column heads, etc.

As it was mentioned in the literature, the typology of mosques of Kurdistan cultural area has been studied previously. The present study has investigated the typology of West Azerbaijan mosques. Hence, the typology of the mosques of East Azerbaijan and Ardabil should be analyzed by further studies, so that typology of all mosques of the northwest of Iran can be achieved.

REFERENCES

Eskandar Beig Turkman; Aalm Ara Abbasid, views of the tenth century AH (2003) Translated by Iraj Afshar, Tehran Amir Kabir Publications

Afkhami Ibrahim; 1993, History of Culture and Literature of Makrian, 2nd volume, Tabriz, Chehr Publications

Behzadfar Mostafa; 1997. Iranian Architecture Collection, Islamic Period, Tehran, SAMT Publications

Pour Mohammadi Mohammad Reza; And Mousavi Sadr Mir Satar; Jamali Sirus; 2012 "A Review of Definitions and Fundamental Thoughts in the Typology of Architecture" Design and Symbol 4: 13-25

Hatam Gholamali, 2000, Seljuk architecture, Tehran University, Jihad Publications

Hojjat Isa, Golestani Saied, Sa'dvandi Mahdi, (2014), Navigating the dome to the mosques of Iran, a narrative of the rupture and annexation of space" The Journal of Fine Arts, Architecture and Urbanism, vol.20, No.3: 21-30

Khademzadeh Mohammad Hussein, Memarian Gholam Hussein; and Salavati Kamyar; 2017 "Analytical Typology of Historical Mosques in Kurdistan Cultural Area" Iranian Architectural Studies 11: 103-124

Dehghan Ali; 1969, Zoroastrian land, Tehran Ibn Sina Publications

Zaker Haghighi Kianoosh; Majedi Hamid; Habib Farah; 2009 "Development of effective indicators on the typology of urban texture", Urban identity 7: 105-112

Rabiei Hadi, (2013), "Application of Typology in the Interpretation of Medieval Christian Art" Alchemy of Art 7: 7-22

Riahi Mohammad Amin; 1993, the History Khoi, Tehran Toos Publications

Zargar Akbar, Mokhtar Shahi Rafooneh, Nadimi Hamid, 2007, Mosque Architecture Guide, Tehran, Did Publications

Shjadel Nadereh, Fari Khosro, 2005, "Preventive repair and protection of the altar of the Urmia Great Mosque" 7th Conference on the protection and restoration of cultural and historical monuments: 379-390 Tehran: Cultural Heritage Research Institute

Sadraei Ali; 2005, Safavid era monuments in West Azerbaijan, Tehran, Ganjineh Honar

Sadraei Khoie Ali, 1994, Khoi vision, Tehran, Islamic Propaganda Organization Publishing Center

Fari Khosro, 2016, "A Look at the Evolution of the Architecture of the Urmia Great Mosque" Congress of the History of Architecture and Urbanism of West Azerbaijan, Urmia

Kavianpour Ahmad, Urmia History, Azar Kohan Publications

Mohammad Hassan Khan Etemado Saltaneh, 1294-1297 A.H, (1993), Mer'at Al-Baladan Naseri (corrected by Abdolhossen Navaei and Mir Hashem Mohaddes), Tehran: Tehran University Press

Moghaddasi Abu Abdullah Muhammad Ibn Ahmad; 375 AH (2nd edition 2006) Ahsan al-Taqasim fi Maarefa al-Aqalim. Trans: Monzavi Alinaghi, Tehran, Koomesh Research and Publishing Institute

Memarian Gholamhussein, Ghaffari Abbas, Gholizadeh Farzaneh, (2017), "Analysis of the classification parameters of historical mosques in Tabriz" Journal of Firoozeh Islam - Islamic Architecture and Urban Planning 4: 43-64

Wilber Donald; 1967, Islamic architecture of Iran in the patriarchal period, Trans. Faryar Abdullah, Tehran, Tehran Book translation and publishing company

Hillenbrand Robert; 1998, Islamic Architecture. Trans. Etesam Iraj, Tehran, Deputy of Urban Planning and Architecture

Documentation Center of the General Directorate of Cultural Heritage of West Azerbaijan Province.