International Invention of Scientific Journal
Online ISSN: 2457-0958
Available Online at http://www.iisj.in **Volume 8, Issue 02(April-May-June)|2024**|Page: 138-148
Original Research Paper-Arts and Humanities

Designing an Azarbaijan's Carpet Museum Using Persian Garden Patterns

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Article Received: 24-April-2024 Revised: 14-May-2024 Accepted: 04-June-2024

ABSTRACT:
This study was chiefly aimed to recognize and regenerate Azarbaijan's art of carpet within Iranian society by establishing an environment for the social activities of various groups based on Azarbaijan's cultural and artistic activities, in the city of Tabriz, Iran. This goal is met by providing appropriate physical spaces using existing Iranian architectural patterns and also by establishing spaces like Persian Gardens, which have throughout history associated with the patterns of the Paradise. On the other hand, man has always been familiar with art, culture, nature and his surrounding environment, and this has been noted over the course of history. Man has always sought to preserve the existing art, which indicates his past culture, civilization and history, while seeking to spread these components throughout his life. Meantime, museums have been vitally recreating environments for meeting social needs and expanding the artistic cultures of other societies and making them known to people in those societies. These environments have also served to meet the above goals in society and enable users to work and involve in these activities. After field and library data were analyzed, design software was used to present the findings in the form of a model to meet the needs and identify the art of carpet and its significance to people in society and other societies within an architectural plan.

Keywords: Carpet museum, Persian gardens, Iranian architectural patterns, Carpet art

INTRODUCTION:

Today, preserving works of art such as Azarbaijan's handicrafts and the art of carpet are critical to promote the culture of this province. A survey of existing examples in the region warrants the need for an appropriate environment for protecting and promoting the art of carpet in Azarbaijan, in particular and Iran, in general. Here, museums play a determining role in meeting these needs. Museums serve to display for the public major works of art, as well as historical, artistic and cultural works. Museums are where these works are held and protected so that future generations will also enjoy such collections of arts. In this regard, designing and implementing a building with a special architecture based on the architectural tradition of the Azarbaijan region and its culture can be both environmentally compatible and greatly contribute to establishing a collection for showcasing the art of carpet. There are various types of museums in large cities, including large collections involving sub-collections, and smaller ones with several specific categories. These categories include fine arts, applied arts, handicrafts, archeology, anthropology, ethnicity, history, cultural history, military sciences, various sciences, technologies, children museum, maps, natural history, numismatics, botany, natural sciences, stamp studies and palace museums. Museum provide the context for investigating works remaining from humans and the environment, and serve to collect works, maintain and preserve their intellectual values, while establishing a relationship between works, not to mention displaying them for intellectual investigation (Nafisi, 2001).

This study aimed to design a [museum] collection using Iranian architectural patterns and also Persian Gardens. This style of design is also closely linked with the art of carpet weaving. Thus, this is the best solution for designing and establishing a carpet museum. This method helps provide an inviting sense and create an attractive but different space both from an architectural point of view and from a visual point of view, which would thus contribute to creating a beautiful environment. Designing a museum based on Persian garden patterns helps pursue several goals at once, i.e., preserving and promoting the culture and art of handicrafts and applying local and Iranian architecture. Also, designing and constructing a museum with an environment like Persian gardens

creates pleasant and desirable contexts for people in society and those who visit such places. This also creates comfort and solace among people. Therefore, the goal of designing and implementing this project was to establish a suitable environment for the above-mentioned goals. To this aim, some solutions and criteria are used.

It is hoped that the review of Iranian architecture and its patterns for designing museums and environments that involve works and art and handicrafts would help promote the culture of preserving works and values (architecture, customs, culture and art of carpet weaving). Also, Iranian traditional architectural teachings and integrating them with contemporary architecture can reveal better solutions for building museums. Designing and constructing spaces such as museums may lead to solutions and policies to preserve cultures and traditions and revive the arts of a society, while laying the ground for the cultural and artistic activities of various groups and their familiarity with the local culture of Azarbaijan.

Iranian classic carpet and its typology

The history of classic carpet-weaving in Iran dates back to the Safavid dynasty; this industry was later expanded in the cities of Tabriz, Isfahan, Kashan, Mashhad, Kerman, Joushghan, Yazd, Astarabad, Herat, Shirvan, Gharebagh and Guilan. In this era, using medallion and hunting designs in the middle of the carpets became increasingly common. Also, Iranian carpet exports in the reign of Fath Ali Shah, and subsequently in the reign of Naser al-Din Shah, saw a big rise, which made Iran the biggest exporter of hand-woven carpets. The Heidarian family was one of the oldest families that produced hand-made carpets and had a history of over 120 years in this industry.

The Bakhtiari carpet is a type of Iranian carpet woven and produced in the Chahar Mahal and Bakhtiari region. Carpet weaving has been common in this province and its cities and villages used to make hand-woven carpets traditionally, especially by women and girls. The Bakhtiari carpet has long been popular due to its colors, patterns and high quality.

The people of the province of Chahar Mahal and Bakhtiari have also enjoyed good conditions conducive for producing hand-made carpet, thanks to their special geographical situation and their location in cold and mountainous regions. Here, in this province, the production of carpets has been more important than other handicrafts. Meanwhile, the carpet has been a major industry of the province, which was first found its way in villages, then in nomad tribes and last in cities. Carpets are thought of as luxury goods in nomad lives and indicate their position and honor.

The most important regions in the province of Chahar Mahal and Bakhtiari include Chaleshtar, Saman, Ashgoftak, Pirbalout, Arjang, Vardanjan, Farrokh-Shahr, Boroujen, Beldaji, Faradbonah, Hirgan, Baba-Heidar, Ardal and related areas, as well as Shalamzar.

The Fars carpet and the art and industry of carpet weaving in this province is also a nomadic art, and secondly a rural art that depends on nomads. Fars nomads, especially the Ghashghaei and the Khamse tribes, are more engaged in this art than others and the villagers who live next to these tribes are also involved in producing carpets and other handicrafts.

Their carpet designs include a variety of special colors and freshness. In recent years, however, nomadic weavers have turned to making carpets for sales and based their crafts on consumer tastes, though they still continue weaving carpets based on common colors used by their ancestors.

This art-industry is mainly performed by women. In general, it is women who produce handicrafts from the first stage to the last stage. The Ghashghaei tribe's carpet loom, like other tribes, is horizontal and requires the weaver to sit on the ground. Most rural looms are horizontal and sometimes vertical. The reason why nomads use horizontal looms is its adaptation with their nomadic life and its easy carriage over the back of the quadruped. Ghashghaei carpets are usually woven in a memorization-based weaving style[1]. These subjective patterns are kinds of traditional regeneration transferred from past generations to modern generations. Tribal weavers also repeat the same patterns without using pre-determined designs. Hence, no two carpets are fully similar to each other. Novice weavers make use of models, called "Hor". Ghashghaei weavers call these models, on which the main images or motifs are woven, "Dastour". Ghashghaei carpet colors are closely linked with the weaver's taste and requirements.

Haris carpet: It is a type of Iranian and Azarbaijani carpet and a handicraft, which was produced in the past and is still produced today. The Haris carpet with broken lines and different colors tells of a story that impatiently whispers the story of love in the altar of art, from behind the flashiness of hundreds of colorful and pleasant patterns. The Haris carpet of Azarbaijani, this cradle of carpet weaving, reveals in each and every corner of it the heart of the design lover and the fingers of the weaver, which generate this golden art to satisfy and enchant the eyes and hearts of each spectator.

Relationship between carpet and Persian gardens

Persian gardens and carpets are both illustrative of each other. The relationship between these two in Iranian culture and history does not just confine to the carpets' overall designs and the illustration of garden elements in them. Carpets display the imagination of the gardens with all details in a clear and transparent expression within a two-dimensional framework, while at the same time addressing all five senses. This viewpoint helps examine the impression of the gardens in carpets, as discussed below. [Iranian] carpets reveal all physical systems and components (natural or

[1] Also, mind-based weaving; here, in this technique, the weaver remembers one or more carpet designs and implements them on the carpet.

artificially man-made elements) in their designs. These carpets illustrate margins (garden walls), axes, water streams, medallion (pavilion or the main fountain of the garden), plotting, flowers, plants, trees, birds, fish, etc. in abstract colors and designs. In most garden-carpets, the water inside the streams is demonstrated by moving broken lines (graphic lines), evoking the sounds and motions inside the gardens. Bird patterns in the carpets also remind of pleasant sounds inside the gardens. Carpets also demonstrate highly diverse flowers and plants, which evoke pleasant smells in the gardens. Some of the flowers are abstract images of real flowers, while others envisage imaginary flowers (Shahcheraghi, 2016:191).

Persian gardens

Persian gardens are cultural, historical and physical phenomena in Iran and refer to a set combining plants, water and buildings within a special architectural context, which creates a safe and desirable environment. According to Islamic Encyclopedia, the word *Garden* is defined to be "A mostly human-made enclosed compound that is home to plants and flowers, trees and water, as well as special buildings based on geometric rules. Persian gardens also involve beautiful elements (Pirnia, 1979:9)". In other words, a Persian garden is a space that combines architectural styles to embody some natural and artificial structures such as water and plants, which thereby demonstrate an imaginary meaning (Shahcheraghi, 2016:41).

Comprehensive patterns of Persian garden

The archetypes of Persian Gardens, from architectural scales to urban scales, have been regenerated throughout history. Persian garden designs have not undergone tangible transformations throughout their various historical courses, and for this, Persian gardens are said to be a style not a type. Some architectural elements and buildings have seen changes based on their functions, and understanding these various functions can help present a clear classification of these gardens. In fact, Persian gardens can be regarded as linking the artificial environment and nature in Iran proportionate to building functions, and their special elements and designs can also be included in special classifications. A review of the literature indicates that various criteria have underlined the classification of these gardens: the scope of functions, the physical features of the land, the area where the garden is established, the climate, the urban geography, and the location of the garden, Iran's historical eras, and special elements in the gardens (Shahcheraghi, 2010:47).

Research has shown that the Persian garden's reference model can be considered as an initiating example (archetype) that served as a basis for Persian gardens. These models have also been represented in Persian garden designs. Using a chronological approach, built upon the formation of concepts and components underlying a triangular garden, the Iranian garden's reference model is described as follows:

"It is a squared- or rectangular-shaped plot of land, enclosed with a wall. The surface of this area is divided into four equal parts by two perpendicularly intersecting axes (streams). The water erupts from the fountain located in the center of the pond at the place where these two axes intersect and is directed to four streams, irrigating the trees inside the squared-shaped surfaces. The main building of the garden (the pavilion) is located at the place where the two axes intersect".

The physical form that most resembles this description is the so-called Persian Expanded Garden design. This design is recognized as a Persian Garden due to its expanded form. Research has examined the Expanded Garden model as the one closely linked with the reference model of such gardens (Sadeghpour-Firouzabadi, 2011:42).

Geometric structure system of Persian gardens

The geometric structure of Persian gardens takes three forms: the establishment of an area along the garden, the inclusion of two perpendicular axes with the formation of three parallel extension lines, and the division of the garden into specifically regular squares.

In Iranian architecture, self-sufficiency and using local materials are key; for this, using a structural system, stated above, has different advantages. First, using the geometric styles helps traverse the land easily; on the other hand, this structure has served as the easiest way for plowing the land, as in the past, as land was irrigated by the least amount of water wastage. This geometry was seen as a tool for renewing cultural beliefs.

The special geometric structure and regularity used in Persian gardens produces a virtual spectrum (specifically in relation to independent gardens in sloped land and flat garden designs), which makes the gardens nearer to or more distant from their real sizes; this is due to human's optical illusions and the places or points established on the main axes, which produce a hypothetical geometry that links the garden and the viewer's metal space.

In Persian gardens, we constantly observe transference from one space to another space. Basically, the blending of the building and the garden is one of the main features of Persian garden architecture, with these two elements blending in a way that makes one puzzled as to where the garden begins and where it ends. The pavilion inside the garden is said to be a small garden, as this association is made by linking spatial connections and relating the elements underlying the garden (Daneshdoust, 1984:221). The qualities of garden-building in Persian gardens also include the utilization of sensory stimuli for creating interconnected spaces.

Garden buildings fall under two sizes. The larger scale that features the main space of the garden and the smaller scale that defines the surrounding of the garden. The main and larger buildings in Persian gardens are mostly assigned to the exterior life, while smaller ones pertain to the interior life, which take the

form of smaller courtyards or neighboring rooms facing the entrance, usually located on either wing of the balcony. Smaller buildings do not disrupt the regularity of the main spaces and the garden geometry (Mirfendereski, 2001:7). According to this classification, the building features of the gardens can be more examined more accurately.

The portal mansion (portal façade) in expanded Persian garden designs, which stands out on the external wall, serves as the main route of access to the gardens. Functionally speaking, it serves as the place of residence for the guards and gardeners, as well as other service employees of the gardens. Portal mansions were actually considered as the outer layers of the gardens, which served to accommodate service members. Sometimes, there was an ordinary door with a latticed wall, instead of the portal, which hindered the direct view of the gardens from the outside (Pirnia, 1978:6).

In expanded Persian garden designs, where the pavilion is constructed in the center of the garden, the balcony (the upper floor) mansion was distinctively placed in the end of the main axis (as in Kashan's Fin Garden or Shahzadeh Mahan Garden). This mansion is usually separated by a certain boundary and is home to residents. This section of the gardens is also called Khalvat, like the Karimkhani Khalvat in the Kashan Fin Garden.

According to the research on expanded gardens, the pavilion design in the expanded Persian garden models has taken on Chahar Suffeh patterns with square-shaped designs or octagonal shapes with Hasht Behesht designs, and also circular forms in few cases. Pavilions in the gardens have usually measured 12 to 20 m, with their largest of which amounting to 25 m, also (Pirnia, 1978:6).

Persian gardens' physical systems

The fabric of all historical gardens consists of three planting, water and building (architectural establishment) systems. The systems may differ from one country to another based on climatic and cultural conditions. The planting system in gardens falls under two types. The first type is the parallel planting system, which is the most rational and economically viable method of growing and traversing in space, and is characterized by the fewest joints, most use of each joint and the least amount of distance covered in space (Diba, Ansari, 1995:36). This type of planting system is functionally effective and affects the landscape system arising from the planting system. This planting system prevents from the loss of the general design of the gardens over time until the lost trees are replaced, while protecting its visual and spatial quality. This also helps prevent from the sudden abandonment of a large part of the gardens and provides regular lighting for all trees (Shahcheraghi, 2016:66).

The second planting system of trees in Persian gardens is the five-point planting system, with four trees implanted in the corner and one being the center of a square shape.

This method characterizes the features of the first method, with the difference being that it provides a lush landscape of trees and is used in desert areas, which creates a visually pleasing and green space. In the Persian garden planting system, trees and plants have also other functions, which are briefly discussed below.

1. **The planting system and the landscape system**

The planting of trees in the place where the pavilion is located emphasizes this place and directs to the main route. Meanwhile, planting deciduous trees creates a diversity of many colors in various seasons and adds to the visual quality of the landscapes (Figure 1).

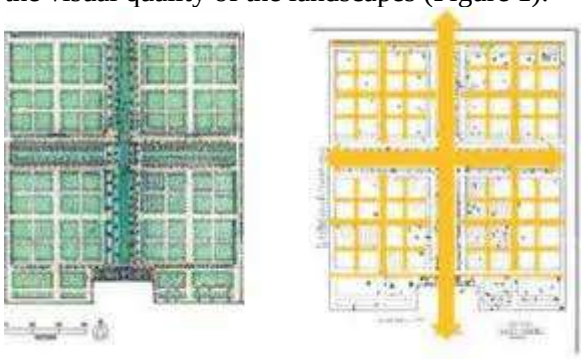


Figure 1: Planting system in Persian garden (Shahcheraghi, 2010).

2. **The planting system and the shading system**

The shading system has basically a key role in the climate of Persian gardens and is regarded as a major component of the gardens. In this connection, planting shading trees on the main and secondary routes creates a pleasant space and this is quite significant in hot and arid areas.

3. **The planting system and the sound system**

Diverse trees in Persian gardens helps attract various species of birds and their pleasant sounds in the gardens, with the flow of the breeze through the lush trees producing various sounds in different parts of the garden.

4. **The planting system and the olfactory system**

Planting and raising fragrant flowers, including orange flower, jasmine, etc. in Persian gardens contribute to the aroma of the garden space, in addition to creating shades and removing dust from the air.

5. **The planting system and the gustatory system**

In Persian gardens, different types of medicinal herbs and vegetables are both used for therapeutic and edible consumption, as they are also used in daily lives. In sum, the Persian gardens' planting system enjoy great features from an applicable and physical perspective (Shahcheraghi, 2016:73).

- High compatibility with irrigation methods in conventional Iranian agriculture
- Economically viable methods for growing and traversing in the space

- Creating visual quality, including vision lines, visibility, virtual density, enclosure
- Physical embodiment in three linear, surface and volumetric form
- Creating a Persian garden-specific landscape system
- Creating a shading system
- Effects on the system of sounds
- Providing such functions as softening the air, attracting the birds, making the space fragrant and effects on the gustatory system in the garden

Figure 2: Sample planting system in Persian gardens

6. The water system

Water is the main element in Persian gardens. Climatic conditions in Iran have required social scientific and technical techniques in gardens and for this, water was also used. Groundwater resources were aqueducts directed towards the gardens and met various needs.

7. Form-based description of the water system

In sum, the form of the water system was either linear around the garden or reflected in square-, rectangular-, polygonal- and dodecagonal-shaped forms. In sloped gardens, vertical forms of water were displayed by creating stages from which water could flow and stream down from one stage to another. In other cases, water erupted in different direction via the employment of marble stones. Also, the water flow helped create pleasant sounds (Figure 3).

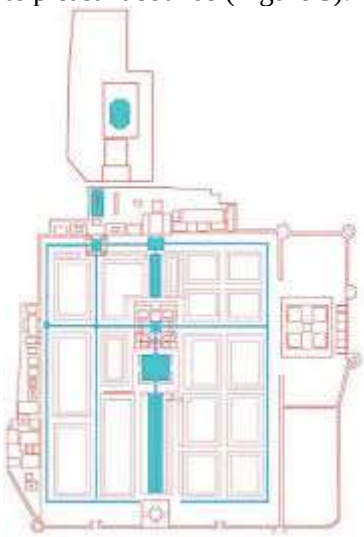


Figure 3: Description of the form of the water system (Shahcheraghi, 2010)

8. The water system and the landscape system

The mirror-like property of water surfaces reflects its adjacent phenomena and thus helps expand the garden vertically within a virtual expanse. Iranian turquoise-green colors used in works of art and buildings virtually give water turquoise-green colors and thus includes a sense of spiritual beauty in the viewer (Figure 4).

Figure 4: The water system and the landscape system in Persian gardens

9. The water system and the sound system

The flow of water in various surfaces in the forms of wide streams, narrow streams, large ponds, fountains, the flow of water onto marble stones, the fall of water from the stages in the form of various waterfalls all produce an unparalleled echo in the gardens (Shahcheraghi, 78).

The establishment system of the buildings in Persian gardens

The way the Persian gardens' system has been established regulates all elements and buildings because it is based on a geometric structure and determines garden elements and components, in addition to its physical systems and elements.

Walls are among the most important elements of the gardens, which are within the general framework of the gardens and serve security purposes, which make them inaccessible and invisible. Garden walls have other functions, including protecting the garden against hot and dry winds, the blowing sand, maintaining gardens' moisture, and creating shading in the garden. Other structural elements of the gardens include larger buildings established in the garden, which are established parallel with the gardens' length in the main axis direction. These elements also follow the gardens' geometric system, with the scale elements in larger structures including the portal mansion, the pavilion mansion and the balcony mansion (Figure 5).

Figure 5: Five pavilion designs based on Iranian expanded gardens (nine-partite designs) (Shahcheraghi, 2010:83).

Other buildings, including the bathroom, the stable, and the warehouse, have service purposes; in some other cases, winter and summer residences, as well as employee residences are stationed in the periphery of the gardens, in a way that does not interfere with the gardens' main areas.

The quality of architecture system

Persian gardens have specific borders and their interior and exterior spaces are linked together by walls, which are the points of inflexion from which Persian gardens start their existence. The extension of the main axis of the gardens, on the one hand, and the tree planting system and the location of the pavilion in the high end of the gardens, on the other hand, help expand the virtual and the infinite spaces of Persian gardens.

On the other hand, Persian gardens are physically characterized by their continuity, connectivity, and integration and follow similar geometric, visual and sensory relationships, as well as the model of the buildings located inside the gardens. Garden architectural systems reveal the integration of artificiality and naturality in Persian gardens and the blending of the systems mentioned above, while eventually giving them special features. These features may include enclosure, privacy, virtual expanse, boundlessness and integrated bordering, as well as space separation and especially visual qualities.

Reason for regenerating Persian gardens in designing the cultural collection

On the one hand, Persian gardens, as natural phenomena, both affect and are affected by people, and on the other hand, humans require the nature inside the gardens. It is also evident that the presence of a garden in a living environment affects individual and group's health, and the people in society need to also be interested in preserving this environment, while culturally adopting the presence of a garden in their living areas (Shahcheraghi, 2016:223).

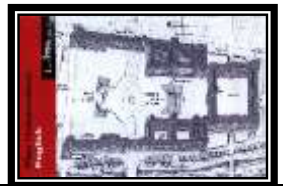
The cultural works of each society not only indicate the mentality, values, ideas and interests of a society, but they also influence these components. In other words, cultural and artistic works are said to originate from the current cultures of society and serve as strong media to influence the culture of that society.

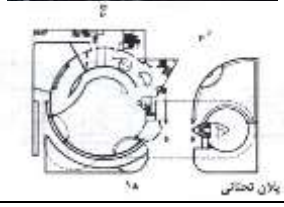
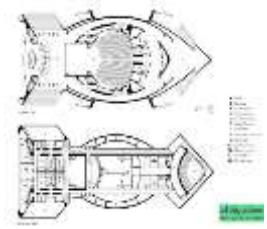
This subject is increasingly becoming important in the current age which is called the age of ICT. In the current era, the tools to express culture and the tools to express works of art are different from those of the past. Besides literature and paintings that serve as forms of art and cultural expression, media such as films and forms of conceptual arts are also indicative of social indicators and serve as strong media to influence the society's culture, and can also promote some values (Shahcheraghi, 2016:223).

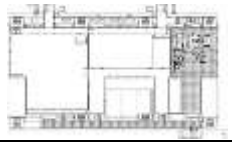
Thus, this section measures the presence of the gardens in cultural and artistic works, which can reveal three themes, as follows:

1. The significance that people attach to the garden in the living environment
2. The level of promotion and the attention to the garden in the living environment in society
3. The significance and recovery of the value of the culture of "attention to nature" in society (Shahcheraghi, 2016:224).

Table 1: Sample museums

No.	Collection	Architect	Description	Architectural documents
1	The Louvre Museum	Louis Philippe	It is the most famous and most visited museum in the world and is home to 35000 works of art from the pre-history era until now; the works in this museum are held in eight different parts	 

No.	Collection	Architect	Description	Architectural documents
2	Guggenheim Museum	Frank Lloyd Wright	This is a cylindrical building with a spiral ramp extending from the ground to the top of the mansion, and the wall continues upwards with a mild-sloped ramp	 
3	Tenerife Orchestra Hall Music Center	Santiago Calatrava	This is the first building of Performing Arts, designed by Calatrava. The complex's site has an area of 2.3 hectares and is next to the Atlantic Ocean.	 
4	Iran's Carpet Museum	Abdulaziz Farmanfarmaeiyan	The Carpet Museum is one ofTehran's museums.	
5	Tehran's Contemporary Arts Museum	Kamran Diba	This complex has a modern design and is inspired by Iran's desert windbreaker patterns.	 

No.	Collection	Architect	Description	Architectural documents
6	Gholhak Water Garden-Museum		With a built-up area of 17700 m^2, this collection is designed by Renzo Piano, Richard Rogerzo, Gianfranco Franchini based on the single-style architecture.	
7	Yazd Water Museum		This building features a traditional style and combines traditional and modern architectural styles and is based on Grand Huts styles.	
8	Tehran's Abgine Museum	-	The Abgine Museum is one of the museums of the city of Tehran. This mansion is a historical site dating back to the Qajar era and is located in Si-Tir St. in Tehran.	

In each society, preserving works of art is a critical issue and for this, all societies are seeking ways to protect and preserve their values and cultures to transfer them to the next generations. To this aim, there should be contexts within society to preserve works of art and to attract people to maintain these works and their ancestral legacy. This goal can be pursued in the form of designing a museum in society. To meet this goal, various research and domestic and foreign researchers have addressed this subject and the following lists their results, as given in Table 2.

Table 2: Research literature

Authors	Years	Research results
Khanizad	2014	This book provides a brief history of the formation of cultural buildings and then defines relevant motives and needs. Meanwhile, the book also investigates the typology of buildings and elaborates on the principles and criteria of land use designs. In the Case Study Chapter, the book deals with a number of outstanding cases.
Grant W. Reed	2011	This book deals with the traditional and non-traditional methods of converting concepts into spatial and partial organization. It also contains different visual techniques of nature-inspiring images to expand naturalistic forms and examples of irregular designs as motives for innovation.
National Construction Regulations (Chapter Nine)	2013	This course debates the minimum criteria and regulations, which if met, the safety conditions, utilization and reliability of concrete buildings can be provided.
National Construction Regulations (Chapter Nineteen)	2013	This chapter provides a number of national construction regulations, design rules, the calculation and implementation of the thermal insulation of external shells, thermal installation systems, cooling systems, ventilation, the supply of hot water consumption and requirements for designing lighting systems in buildings.
Paradise paradigms	2016	This book investigates all physical systems of Persian gardens and their semantic systems. Also, the book deals with the designs of Persian gardens in historical eras, as well as the location of the pavilions and the impacts of the climate on the design and construction of the buildings and the pavilions in the gardens.
Talebian, Atashi & Nabizadeh	2011	This book briefly investigates the current role and position of museum architecture, classifies the museums and addresses the aesthetics of the form and complexity of functions for designing museums; a number of museum projects has been introduced and their proportionate guides are provided to investigate the forms of the museums. The book also discusses the history, complexity of functions and perspectives about designing museums.

Mohammadi & Ayatullahi	2014	This article investigates the interrelationship between spatial qualities and social concepts, including sociability in urban architecture and design and their application in designing cultural buildings. Findings suggest a direct relationship between the level of sociability and the physical and activity components of the built environment.
Moradilar	2017	This article demonstrates that pavilions are the most important elements in Persian gardens. The article also discusses the types of designs and the location of the pavilions, the types of building forms, and the number of stories and some other parameters in different historical eras. Regional climates, places, governments in each era and public needs have also been discussed.

METHODOLOGY

The method of this study was descriptive-analytical based on the nature, subject and objectives of the study. This study fell under applied research. First, case studies at national and international levels, library sources, as well as field and documentary studies were investigated to identify the factors affecting the design and construction of museums and art centers, while guidelines affecting the realization of constructing museums were also examined. Data needed were collected from books, articles, and archives as available on the Internet. In the first stage of data analysis, library sources and documents were used, in addition to the examples available.

Understanding the area under design

Tabriz, as the provincial capital of East Azarbaijan, lies 635 km west of Tehran, 135 km south of Jolfa and 50 km northwest of Mt. Sahand. The province covers an area of 9870 hectares and Tabriz City has an area of 11801.2 square km. This city is bordered by Marand and Ahar Cities to the north, Maragheh to the south, Hashtroud to the east, and Bostan Abad-Sarab and Mianeh to the west. It also features a sedimentary plateau with a moderate dip towards Urmia Lake and West Azarbaijan. Tabriz is located in Latitude 38°15' N, and Longitude 46°22' E, and is 1351 m above the sea levels (Figure 6).

Figure 6: Geographical position of Tabriz City

The historical and sight-seeing areas of this city include Kaboud Mosque or Gouy Mosque (dating back to the second half of the 16th century) Ark Alishah (an old and colossal mansion that pertains to the Islamic architecture masterpiece of the Ilkhanid era), Grand Mosque of Tabriz or Jame' Mosque, Seyyed Hamze Shrine (Mosque), Maghbera al-Shoara (the burial site of poets and mystics, including Asadi Tousi, Khaghani, Sharvani, Zahir Farabi, Ghatran Tabrizi, Homam Tabrizi, Salman Savaji, Ghotb al-Din Shirazi, and the great poet Shahryar), Rob' Rashidi, Tabriz Bazaar (one of the most beautiful and the largest market collection in Iran), Saheb al-Amr Shrine, Akbariya School, Seyyed Ebrahim Shrine (on Shahms Tabrizi St. and in Douhji Neighborhood), Do-Kamal (two Kamal) Shrine (the burial site of Kamal al-Din Masoud Khajandi, a famous poet of the 15 and 16th centuries, and Kamal al-Din Behzad, the most famous miniaturist painter of the 17th century), Il-Goli or Shah-Goli (a recreation center in southeastern Tabriz), Azarbaijan Museum, Tabriz churches (including The Adventist Church, the three Armenian Gregory Churches, the Protestant Church and the Catholic Church.), Masjid Maghbarah, Khelat Poushan Tower, Ghotb Ravandi Shrine in Khosrowshah, and Grand Mosque of Khosrowshah.

Traditional buildings in cold climates, such as the central areas of the Iranian plateau, had central courtyards, with other parts surrounding these courtyards. The rooms located in the north of the courtyards were larger than other areas and the hall or the main sitting rooms were also situated in this side of the courtyards. This design was aimed at using direct sunlight in the cold season of winters. The southern fronts of the buildings were less used due to the shorter and moderate conditions of summers. For this, southern, western and eastern rooms, if any, served as service warehouses or spaces and also served as accommodation for the workers and as WCs. Unlike moderate and humid areas in southern coasts of the Caspian Sea, the houses of these regions usually held underground cellars with short ceilings, under the winter-houses, which were used for the residence and comfort of the residents in summers, due to its cool air.

The main site

Favourable wind

Annoying noise

Cold and annoying wind

Annoying light

Favorable light

CONCLUSION

The art of carpet has a long-established history in Iran. Since the richness of each culture is largely dependent on the history of that culture, Iranian art and culture have experienced various difficulties and become consolidated. Iranian culture has also gone through historical eras and appeared as a result of ethnic struggles within subsequent periods. Although Iran enjoyed a strong culture in various eras, little attention has been paid to its arts and civilization in recent years.

Architecture can lay the ground for representing the pure art of this land by establishing environments deemed proper for cultural training and interactions, and thus adopt cultural and artistic approaches by designing centers as museums. On the other hand, a museum space is a major part of this collection whose features affect the entire collection. The individual's experience of the three-dimensional space of an art gallery is a fast perception, which is achieved in an environment with an illuminated, easy to access and less-monotonous space than in a space with a poor configuration and weak readability. An art gallery or expo is a special type of the environment where the relationship between man and the space is a complex one. Architecture can largely be adapted to objects; in some parts, however, this is only achievable through practical measures and decorations.

The idea and concept of designing the museum building: The museum is inspired by the geometric patterns of Iranian carpets and Persian gardens, which feature regularly symmetrical square- and rectangular-shaped forms. Museum designs are also characterized by Iranian architectural patterns, which are formed by special lines and layered forms. Also, the [museum] building's entrances and the main angles create an inviting sense towards the inside of the building and provide fluidity and softening in the volumetric forms of the main form of the building.

After providing the general volume of the building for designing the external façade, a number of Iranian architectural elements, which is a set of windows with colorful glass and special geometry, combined with local materials that symbolize Iranian architectural patterns, were repetitively used. This configuration can give a special harmony to the building itself.

Also, Persian garden patterns, which evoke the Paradise for Iranians, were used to design and create the museum complex's compound and design its plan site. The plan includes the location of the pavilion as the main element of the Persian gardens and the use of the main axes in the gardens as a comprehensive pattern of Persian gardens, the planting system in the form of tree plantation system and the water system in the form of fountains and streams in the compound.

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