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Desiging Tabriz Carpet Art Museum Architecture Based on the Blue Mosque Historical Context Identity Potentials

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Abstract
Due to universal importance of Tabriz carpet art and presence of specific indicators and motifs in Tabriz carpet art and its potentials, existence of architectural site for representing this art as carpet art museum in Tabriz is necessary. The site of this project is located adjacent to Tabriz Blue Mosque near the museum historical site. It is essential to consider the historical elements and components of the mentioned district identity in historical sites. This research aims at presenting architectural design of a valuable work of Tabriz carpet art museum besides considering criteria of the historical site adjacent to the Tabriz Blue Mosque. In designing Tabriz carpet art museum, the site potentials, concurrent employment of cultural and historical fabric concepts, adjacency of the Blue Mosque and being in direction of historical bazaar and Silk Road have been considered and used as the key pivots in design. This research is a case study based on observation and using architectural tools. Design limitations have been considered in the architecture of the museum near historical fabrics. The design components consist of Tabriz Bazaar cultural-historical architecture elements, utilization of the spatial connection, semantic continuation, respect to the site, preservation of old historical memory in modern approach. The results of this research can lead to successful architecture design adjacent to historical sites.

Key Words: *architecture design, museum, Blue Mosque, cultural historical fabric, Tabriz*

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Introduction

Tabriz carpet is one of the main ornaments and it is famous all over the world and according to the programs proposed for expansion of tourism in Tabriz, existence of appropriate infrastructures and equipments considering Tabriz historical precedence in historical periods including military, economic, political, historical and cultural functions and old artistic attractions and also existence of high potential for tourism attraction Tabriz needs a dynamic space to represent its art and teach its mysteries to the world. One of the main reasons is importance of Iranian carpet among nonoil products export; however, Iranian carpet has encountered with problems such as reduction of export after 1994 which Iran share in world commerce reduced from 41% to 31% during 20 years. Of the reasons for decline it can be mentioned existence of rivals, competitions in the recent half century and reduction of the carpet wavers (Carpet Quarterly, 1999, 37). In this regard, Tabriz carpet was famous in the world and now it requires a place for representation and survival. Because of importance of plant motifs in the carpets which in some cases prevent observing the background color these motifs represent garden as one of the main concepts in Iranian culture and focus of Iranian thoughts and emotions (Zoleh, 2002, 26). The plant motifs with curved and cursive lines are used in most of the Iranian carpets and presence of plant motifs are seen in various styles in carpet design (Azarpad, Heshmati, 2004, 123). According to lack of appropriate space for instructing carpet for next generations and also sufficient equipments, attraction of the world market interest in this attractive and eternal art and attraction of the traders and tourists for investment in Iran and Tabriz will be beneficial and this museum site with public space will play a role in instruction, propagation and presenting artistic background.

Methodology

Goals

Obtaining the main indicators in the world contemporary museums architecture

Research question

What are the main indicators in designing the world contemporary museums architecture?

In this research the theoretical foundation and research method is descriptive and analytical and the data were collected documentary and the statistical population consisted of the world contemporary museum and statistical sample involved ten mentioned specimens.

Museums

Museum is one of the urban spaces that have played a main role in shaping national and vernacular culture (Zare, 2013, 11). Museum is one of the primary places which was constructed for holding and registration of cultural changes. This important tool has been effective in this regard (Heydari, Saatiyan, 2010, 15). It is a place that human thinks about the past and present and he finds the lost chain and refreshes his memory there (ibid). Museum is a way of communication and it is a kind of experience and perception of history, culture, society, human, world, time and anything. Undoubtedly, emergence of museum has had complex and deep motivation than an old eagerness to collection, possession and preservation of the objects and ancient and memorial tools as they were in their past forms. Museum is considered as a sociologic model and very good experience since on one hand it is a place where the individuals gain awareness on society and experience being beside each other in particular and places three dimensional effect on the other hand (ibid). In the following table, history of museum in the world and Iran has been summarized.

Analysis of site

The site has been analyzed from historical trend and current use point of view.

Introducing site

The plot is of importance as a medium for designing. The positive and negative points

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Encyclopedia definition of carpet

Author	Reference	Definition
Moshiri Mahshid	The first alphabetic and comparative Persian dictionary	Carpet: everything expanded on the floor for sitting and sleeping on it like rug, mat, woolen cloth (Moshiri Mahshid, 1995, p.761).
Amid Hassan	Amid dictionary	Carpet: expanding and spreading something like rug, everything spreading on the floor (Amid Hassan, 1995, p.1527).
Moein Mohammad	Persian dictionary	Carpet: everything that is spreading on the floor as rug (Moein, Mohammad, 2009, p.2413).
Sadri Afshar Golamhussein	Persian dictionary	Carpet: woven by natural or artificial fibers for placing on the floor for covering it (Sadri Afshar, Golamhussein, 1996, p.826).
Ensafpoor Golamreza	Advanced Persian dictionary	Carpet: something spreading on the floor or covering a part of floor such as carpet, mat, it is metonym for earth and world in contrary to sky (Ensafpoor Golamreaz, 1995, p.775).
Falahfar Saeid	Glossary of Iran traditional words	Carpet is anything used for covering floor, covering of the floor by brick, adobe and stone etc (Falahfar Saeid,2000, p. 158).

Table 1: Definitions of carpet, Resource: Author research

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and hidden potentials in the site are effective factors in design. For this reason, identification and analysis of these factors are essential. Hence the project is investigated from sunshine, pleasant wind blowing, accessibility and etc. The mentioned site is located in an area of 5500 m2 approximately adjacent to Blue Mosque. This site is located between Imam Street and Khaqani Street in neighborhood of Municipality monument and Tabriz Bazaar (Old Bazaar).

Site localization studies

Selection of the site for this project is very important. The reasons for selection of this site are as follows:

1. Placing the site in the city old fabric(district 8)
2. Placing in the bazaar main axialin direction to old bazaar called Silk Road.
3. Adjacency to beautiful monument of Blue Mosque for having appropriate vision from the site inside
4. Placing the site near the main avenues
5. Proper entrance function and access to site **inside and outside**

Survey on district 8 on the detailed map

Figure 1: district 8 detailed map; Redrawing: authors

Survey on the site in the block of district 8

Figure 2: Survey on the site in the block of district 8; Redrawing: authors

Main historical and cultural places in the block of district 8

Figure 3: Main historical and cultural places in the block of district 8; Redrawing: authors

Main site neighborhood includes: Blue Mosque, Old Bazaar, Khaqani Park, Azerbaijan museum, Mirza Salman Hakim Mosque, Electricity Organization; Figure 4: site neighborhood, Redrawing: authors

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Encyclopedia definition of museum

Author	Reference	Definition
Moshiri Mahshid	The first alphabetic and comparative Persian dictionary	The place for showing the artistic and old works and different collections (Moshiri Mahshid, 1995, p.1052).
Amid Hassan	Amid dictionary	Collection of antique works, the building for holding and protecting old works. In old Greece it was a place for studying art crafts and sciences and also it was a hill with fireplace for worshipping and the place of gods (Amid Hassan, 1995,p. 8970).
Padishah Mohammad	Advanced Persian dictionary	It was meant a kind of boot (Padisha Mohammad, 1984,v. 6, p. 4188).
Moein Mohammad	Persian dictionary	A place for protecting the ancient works (Moein, Mohammad, 2002, p.917).
Sadri Afshar Golamhussein	Persian dictionary	A institute for collection and holding and protecting and representing the valuable works (Sadri Afshar, Golamhussein, 1996, p.1088).
Ensafpoor Golamreza	Advanced Persian dictionary	Treasury, the place for protecting and representing a set of industrial, artistic, historical and old works (Ensafpoor Golamreaz, 1995, p.1133).

Table 2: Definitions of museum, Resource: Authors research

Studied alternatives

Studying alternatives

Concept museum size shaping trend

A simple geometry has been shaped based on carpet warp and woof movement.

Steps of using bazaar pattern in designing museum architecture spaces: Iran bazaars architecture

Iranian bazaars are usually divided into linear and centralized groups. Linear bazaars are also divided into direct and organic. Organic bazaars which are indirect have been shaped during time due to existence of one shop and they do not obey predesigned plan. These bazaars have been formed gradually by development of cities and converting villages to small towns and big cities. Therefore, linear and direct bazaars have been shaped as designed mostly in direction of the main routes as completely direct. Tabriz Bazaar, Shiraz Vakil Bazaar and a part of Isfahan Bazaar are examples of linear bazaars. The manner of shaping centralized bazaars differs from linear bazaars. Centralized bazaars were shaped as the main urban elements. Squares are the main determinant spaces in the centralized bazaars such as Isfahan Nagseh-e-Jahan. However, Iranian bazaars have mostly shaped linear due to their functional role as place of movement inside the cities.

Structural elements in Iranian bazaars

Analysis of the bazaar architecture structural elements

Figure 9: Analysis of bazaar space cross section; Drawing: authors

Figure 10: Analysis of bazaar space cross section; Redrawing by authors (Nasiri, 2003)

Figure 11: Analysis of bazaar space cross section; Drawing: authors

Figure 12: Analysis of bazaar space cross section; Drawing: authors

Figure 13: Analysis of bazaar space cross section; Drawing: authors

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Classification of museums

Name	Explanation
History and archeology museum	These museums are historical and depict historical periods and most of the works have been obtained in archeology investigation representing the past culture and civilization which combine sciences, art and knowledge of a nation or nations. Such museums are also called mother museums: Iran ancient national museum, Versailles national museum in France and history museum in Washington in the USA are such museums.
Artistic museums	Represent different types of fine arts and decorations with high aesthetic value and they usually have numerous visitors. Tehran fine arts museums and decorative arts museums in Isfahan are this type.
Scientific museums	These museums are highly active which protect environment and natural sciences museums should play a determinant role in informing people. In academic level, these museums offer the researchers well informed documents.
Specialist museums	Some researchers introduce these museums fourth type of museums and some others do not consider them independent from other museums since they can be involve artistic, historical and scientific museums. They are divided into two main groups: 1-specialist museums in open space 2-regional specialist museums
Anthropology museums	They represent customs, beliefs, costumes and social rituals and Tehran anthropology and Kerman Ganjali khan bath are this type.
Mobile museums	They are shaped for rapid fulfillment of cultural goals due to lack of feasibilities in deprived areas and cities. These museums represent various cultures and they will be effective in case of attention.
Park museum	Due to having various scientific, cultural and recreational and educational aspects these museums are of importance since they represent biologic and natural issues. The main characteristic of these museums is that the people can visit them. Park museum has no record in Iran but they are common in China and South Korea. Historical, national and cultural places such Firdausi tomb in Mashhad and Attar and Khayyam in Neishabor can be best place for this purpose.

Table 3: Classification of museums, Resources: authors (Alam Poorrajabi, 1998)

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Using bazaar architectural elements in the plan

Figure 14: Using bazaar architectural elements in the plan; Drawing by authors

Figure 15: Using bazaar architectural elements in the plan; Drawing by authors

The ideas employed in designing museum

• Using the warp and woof in deign idea and settling of the warp and woof of the carpet in the site

• Using a main pivot in the site in direction to old bazaar and Old Tabriz Silk Road

• Movement of visitors in the site and passing through the route and observing the trend of shaping carpet and its representation

• Placing the plan on ground due to low height of museum to prevent eliminating view of Blue Mosque

• Shaping of the bazaar architecture as a direct line which all bazaar spaces and movement in the bazaar are seen.

• Having introverted spaces and establishing

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Museums typology

Museums typology	Shaping form	Ceiled museum	
		Open museum	Museum site
			Eco-museum
		Mobile museum	
		Street museum	
		Historical museum	
	Content	Artistic museum	
		Scientific museum	
		Local	
	Scale	Province	
		Regional	
		Meta-regional	

Table 4: Museums typology, Resource: authors research

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Museum duties

Duties	Explanation
Attraction of people	The visitors are divided into two groups: those who have preliminary familiarity with museums and those who have not knowledge on this regard. Hence, the main duty of museums responsible is to encourage the people to utilization of museums (Zare, 13).
Instruction	The museums have accepted to teach the people new thoughts in individual, in group or incidentally (ibid, 13).
Representing of the works	The main duty of the museums is to present the specimens as their original forms as possible as they can (ibid, 13).
Preservation	One of the main duties is preserving and holding the objects and documents which include protection of the objects (ibid, 13).
Registration and protection	After identification and determination of the identity the details of the objects are registered in a big registration book which includes historical periods written in books ordered by subject (ibid, 13).
Identification and determination of identity	Other duty of museums is identification and determination of identity of the objects. One of the characteristics of museums is that they are based on the competency and honesty of the staff which in other case it leads to difficulty (ibid, 13).
Collection	Advent of the developed civilizations offered opportunities for collection of valuable tools such as weapons, silk, gold, jewelry etc. These tools led to expansion of collections available for public called museum (ibid: 13).

Table 5: Museum duties, Resource: authors (Zare, 2013)

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Specific explanation	Alternative 1
The general idea for design is using carpet adobe design so that the spaces are shaped continuously and have continuous movement inside the museum and inside each adobe there is a movement sometimes in the ceiling or floor as bridging spaces. Because of importance of number four and fourfold layers and also it's symbolic aspect in Iranian culture like four gardens and four porches these designs have been used by fourfold movement in reaching to a place like belvedere in the garden.	
Advantages: - having architectural concept similar to the mentioned site -having continuous volumes in direction of the old bazaar -observing climatic orientation -cost effectiveness due to having geometrical shape	
Disadvantages: -nonobservance of Blue Mosque view -having many floors according to the museum area -having rigid volume	

Table 6: Alternative 1, Redrawing: authors

Specific explanation	Alternative 2
-The idea of continuity and integration from one point to end -Having Islamic movement as symbol of carpet which is fluid -The Islamic motif in the site and volumes in any section with different role including element, place of sitting, volume crossing and movement in the ceiling	
Advantages: - having architectural concept similar to the mentioned site -using design approach - cost effectiveness due to having geometrical shape -Creation of appropriate urban space in the site for visitors Disadvantages: -nonobservance of Blue Mosque view -having many floors according to the museum area -nonobservance of climatic orientation	

Table 7: Alternative 2,Drawing: authors

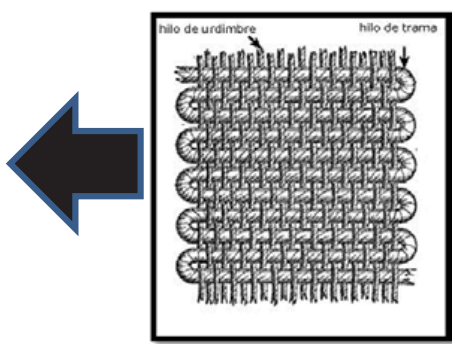


Figure 8: concept

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Specific explanation	Alternative 3
The ways slope associates the visitor movement from the site floor toward top as progressive. The volumes in slopes are sculpture which represents itself. The plan reaches to bottom by an apron.	
Advantages: -having continuous volume in direction of old bazaar -going up and down is similar to traditional fabric. -having rigid volume observing climatic orientation	
Disadvantages: - lack of architectural concept similar to the mentioned site -nonobservance of Blue Mosque view -having high height -nonobservance of climatic orientation -non-cost effective due to having complex volume	

Table 8: Alternative 3, Drawing: authors

	Alternative 1	Alternative 2	Alternative 3	Final plan
Project economy	5	4	2	5
Identity	4	4	3	4
Culture	4	3	3	4
Site components	4	5	3	5
Project speed	5	4	2	5
Climate	5	5	5	5
Attention to the carpet components	2	5	4	4
Historical fabric	3	3	3	3
Access	5	5	4	5
Services	4	4	4	4
Attention to the design potentials	2	2	2	3

Table 9: Studying alternatives, Summing up: final plan was selected by 52 scores from 55 scores as the museum plan

central yard in the site by using bazaar architecture

• Axial movement in the site which can be movement of water or tree or visitor for showing Silk Road.

Norms related to the building façade in Tabriz cultural and historical district

• Number of floor is not more than two(the basement is pilot)

• Maximum height of the building is 9 m

• Observing the height in level of historical monument in the adjacent plaque to historical monuments

• Main spaces in the plan should be defined (minimum one symmetry is necessary)

• In the plan the spaces axial should be conformed to the monument pivot or be symmetrical relative to axis.

• The façade should have divisions proportionate with plan so that each division should be symmetric.

• The main axis is the building axis.

• The divisions of the surfaces should be symmetrical relative to building main axis.

• Maximum width of the window toward

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Bazaar structural elements	Explanation
Rasta(covered pathway)	They are usually linear including shops in both sides as main and secondary.
Corridor	It is a connective space playing that bridges internal space with external space only in inner space. Porches connect halls to the rasta(covered pathway) in big bazaars.
Intersection (charso)	Intersection of two rasta(covered pathway)s which is the intersection of the main rasta(covered pathway) which is similar to the main connective squares in modern cities in terms of communicative and social function.
Square	There were besides or in direction of some main bazaars or alleys.
Chamber	In simple words, they are the smallest member of the bazaar space.
Caravansary	They are the main structural elements in bazaar which were constructed due to development of rasta(covered pathway) and incapacity of the shops in meeting need for supply the products.
Timcha(covered caravansaries inside the bazaar)	In this century the small ceiled corridor is called timcha(covered caravansaries inside the bazaar).
Caesarea	It is a corridor which valuable and expensive goods especially expensive textiles are sold.
Services and public spaces	These spaces include cistern, reservoir, stable, warehouse and etc that are variable according to the area of the bazaar. Public spaces consist of mosques, schools, bath and etc.

Table 10- Bazaar main elements, Resource: author (Nasiri, 2003)

the passage should be 120 cm and its length should be 225 from the floor.

• Façade framing should reflect the interior spaces. In other words, the symmetry in the plan should be seen in the façade (adobe inscription is proposed for completion of framing).

• Materials can be brick with proportionate framing or combination of adobe framing and white cement plaster or white cement.

• Stone saw with local ax type maximum in length of one meter

• The monuments façades across the main passageway follow the yard façade norms including adobe farming and etc.

• Using aluminum doors and windows is prohibited.

• Arrangement is essential at the end of the building façade.

Conclusion

Nowadays in architectural designing of spaces adjacent to historical and cultural fabrics the fabric potentials are used besides conceptual notions proportionate with the mentioned subject design content. In architectural designing of Tabriz carpet museum adjacent to the Blue Mosque historical and cultural fabrics some semantics notions proportionate with the fabric have been used. Utilization of the main pivots, carpet warp and woof, respect to the fabric value, application of ramp, movement circulation by outlook on Tabriz Bazaar architecture, creative employing introverted designs with new interpretations etc are the intelligent characteristics in the design. Using the site main axis was done by continuation of the old bazaar and the main route between bazaar and street gate to Silk Road. Utilization of the warp and woof rooted in placing carpet warp and woof in the site was one of the main features. Placing a part of the plan on the ground and underground was due to the low height of the museum to prevent elimination of the Blue Mosque view appeared as new form in the project by Iranian bazaar architecture and carpet design which was other characteristic of the project architecture. Employing warp and woof notions as ramped spaces in the floor and in the ceiling represents carpet in the site. Utilization of move-

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ment circulation such as Tabriz Bazaar architecture that covers all bazaar spaces reveals introverted spaces with central yard causing to designing urban spaces for optimal use of the visitor without entering to the complex. The results of the project design were concurrent respect to cultural and visual values of the site historical context and attention to carpet museum spatial optimal design structural demands.

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