

Investigating the Architectural Motifs of Dowlatabad Garden in Yazd and Fathabad Garden in Kerman

Behesteh Amini^a, Javad Derakhshan^{b*}, Mohammad Hossein Jafari^b

^aMaster of Arts student, Department of Fine Art, Yazd Branch, Islamic Azad University, Yazd, Iran

^bFaculty member of Art and Architecture, Yazd Branch, Islamic Azad University, Yazd, Iran

Received 08 August 2018; revised 26 September 2018; accepted 17 October 2018

Abstract

The Persian garden with a mansion and the water obtained from the qanat with the planting of flowers is in the form of a square or a rectangle. Examples of this type of garden are Dowlatabad garden in Yazd, which refers to the Zandieh period and Fathabad garden of Kerman, which was built during the Qajar period. The present study, using a descriptive-analytic method, investigated the architectural motifs of Dowlatabad garden of Yazd and Fathabad in Kerman. This study seeks to find the differences and similarities between the architectural motifs of these two complexes. The findings of the research show that geometric patterns are used as the basic and main drawings in the architecture of Dowlatabad Garden in Yazd. Geometric, plant, animal, human and such combination designs have also been used in the architecture of the Fathabad garden of Kerman. Geometric motifs are the common architectural designs in the two garden complexes.

Keywords: Dowlatabad Garden; Fathabad Garden; Iranian Garden; Motifs; SPSS

1. Introduction

Iranian garden is the heavenly paradise for pleasure and peace as a work of art. The construction of the garden in Iran has taken place in accordance with the spiritual needs of mankind. The presence in the mansion of garden with motifs which are formed based on symbolic thoughts and impressions and its architecture are more tangible, that is associated with the history of the garden. Persistent gardens of ancient heritage in Iran were built with great attention of rulers and kings of that era, and they have valuable architecture with a treasure of decorative motifs, and artists try to use these eye-catching designs in architectural decoration in various ways. Among these gardens,

* Corresponding author. Tel: +98-9133513612.

E-mail address: derakhshan@iauyazd.ac.ir.

the two garden complexes of Dowlatabad in Yazd and Fathabad in Kerman are not exception. The study of decorative motifs used in architectural decorations of Dowlatabad garden in Yazd and the architectural decoration of Fathabad garden in Kerman is the subject of this research. The main objective of this research is to find the differences and similarities of these architectural motifs on the two structures of Dowlatabad garden of Yazd and Fathabad in Kerman. Accordingly, this research seeks to answer the question of what kind of motifs are used in architectural decoration of two Dowlatabad gardens in Yazd and Fathabad in Kerman? The importance of examining the two above mentioned works are because of the examples of historical, state and residential buildings of the two near provinces of Yazd and Kerman. This article after studying the Persian garden as well as information about Dowlatabad garden of Yazd and Fathabad garden of Kerman, reviews the motifs related to the architecture of the two gardens.

2. Methodology

This research has been done by descriptive-analytic and comparative approach. The gathering of the required information has been achieved through book reading and observation studies. Firstly, at the description stage, we introduce two complexes of Dowlatabad garden of Yazd and Fathabad in Kerman. Then the architectural motifs of these two gardens were analyzed and their similarities and differences were identified.

3. Meaning and Concepts of Keywords in the Research

Soltanzadeh et al. (2014) in their book with the title of (Fathabad Garden Architectural History), were analyzed the motifs types of these decorations after identifying the decorations of the Fathabad mansion. Soltanzadeh (2007) in his research project titled (Fathabad garden) has examined Fathabad's garden complex in general. Khabiri (2014) in her book (Yazd from another glance) after defining the Dowlatabad garden introduces some of its architectural decorations. Bahadori (2008) in his book entitled 'Wind catcher, an Engineers masterpiece', reviewed the architecture of the Dowlatabad garden in Yazd, and has introduced the building based on geometric shapes.

3.1. Iranian Garden

Gardening in Iran due to the particular climatic conditions, is more influenced by construction systems, especially irrigation systems, although sensory and aesthetic factors in later stages have a special role in gardening. The specific climatic and specific morale of Iranians have led them to become more functional in the field of architecture and gardening (Pourmand, 2011: 52). Until the last days of the Qajar era, or until the last days of traditional architecture in Iran, many gardens in Iran are being constructed, all of which are in the form of a space of four gardens and these continue the various designs of the ancient heavenly gardens, while it should be considered that the beliefs and culture of each period are the source of the culture and beliefs of the later periods (Daneshdost, 2015: 179). The image of the Promised Paradise, formed from the earlier periods in the Iranian mind is imagination of the most beautiful and pleasant gardens of Iranians, which refer to the name of paradise in various gardens (Wilber, 2005: 41). By examining the rules of the Gestalt Psychology School, there are some hidden aspects in the design of the Iranian garden plan, which have been popular in the Iranian garden since time of Gestalt school birth. (Gholami Rostam et al., 2015).

3.2. Dowlatabad Garden Complex in Yazd

Dowlatabad garden was built on the orders of Mohammad Taqi Khan Bafqi, governor of Yazd. The beautiful wooden structures of the wind catcher, including the sash window with colored glass, were restored and beautifully renovated by Abbas Mojaver, the carpenter of the Technical Bureau of Preservation of Antiquities. The elegant facade of the vestibule roof is the work of master Haj Ali Akbar Akhond, architect of the cultural heritage organization, which has been masterfully done with wire and gypsum plaster. Architectural elements of Dowlatabad garden design is one of the most original and most innovative Iranian garden projects. The garden surface is divided into two sections with a rectangular environment with dimensions of 116 meters and 104 by 278 meters, which are perpendicular to each other. The larger rectangular environment means what the public knows as the garden of Dowlatabad, and it has formed the interior garden, which is in fact the private garden and family residence of Mohammad Taqi Khan. The smaller rectangle space on the north side defines the outer area of the garden. This garden, called the Paradise of Ethic, is the venue for state ritual and sporting events (Khabiri, 2014: 123). Javaherian quotes from Pourjafar: The garden with an area of over 40000 square meters is one of the most famous and beautiful gardens of the Zandieh era, which was built at the time of Karim Khan Zand.

Its main index is the highest octagonal wind catcher with a height of 33.8 meters, the world's tallest wind catcher. The garden consists of several main mansions including: Vestibule mansion including basin and wind catcher, pergola, paradise of ethic and mirror hall, southern porch and subsidiary building such as large stables, subterranean building and service, water storage (or reservoir), pantry, kitchen and well and water supply facilities, and is connected to the south by the aisle to the area under the wind catcher. The main facade mansion is the main building of the paradise of ethic gardens, which has two floors and consists of a chamber, a vestibule and a small room and a few aisles (Javaherian, 2004: 109). The architecture of this building refers to the Sassanid era and Khan tried to follow the design of the Ctesiphon in the design of the main building. This unique building marked the emergence of secular architecture and its importance in the non-religious city landscape (Modarres, 2014: 68). The most interesting building is the vestibule on the horizontal surface of the building, which is based on hexagonal or octagonal geometry. At the vertical level, the building is in two ways, with one and two floor height, with dome roof and central skylight, the flow of air and water is well integrated within the wind catcher, and the water flow in the garden forms the main design framework. (Bahadori, 2008: 233). Dowlatabad garden of Yazd is one of the great gardens of Iran similar to the garden of the Fin of Kashan and Shahzadeh Mahan garden. Water in the garden of Dowlatabad poses harshly. The architect has unevenly played with water into the ground and brought it out many times (Tavakoli et al., 2004: 47). The garden is considered as Iran's spectacular collections because of the art of distributing water and architectural design. Dowlatabad garden is irrigated from qanat, and the water flow in the garden forms the basis of its skeleton design (Afsharsistani, 1999: 127).

3.3. Fathabad Garden Complex in Kerman

Fathabad garden, located 25 km from Kerman, is one of the most important historical gardens in Kerman (Mehdinejad and Sadeghi Habibabad, 2015: 3). Fathabad garden is located at the end of the Northeast Frontier of Ekhtiar Abad and after the construction of the railway line Kerman-Zarand, it has been completely separated from Ekhtiar Abad (Soltanzadeh, 2007). The complex among the enclosed gardens of these lands was once the property of Fazlali Khan, the governor of Kerman, at the end of the Muhammad Shah Qajar period, and was irrigated by the qanat (Soltanzadeh et al.,

2014: 41). The oldest document that was found referring to the Fathabad garden is a plan dating back to 1859, in which Fathabad gardens are named. The construction period of which is related to the last decade of the 13th century and the first decade of the 14th century. In any case, the garden is famous for a few names. Including 1- Fazalikhan garden 2- Biglarbeigi garden 3-Garden of Hussein Ali Khan-Fathabad. But the people of Kerman know this garden as Fathabad at the height of the boom (Soltanzadeh et al., 2014: 41). The garden and mansion of Biglarbeigi in Fathabad is one of the historic gardens that its famous Qanat, once the old and famous Qanat of Kerman, has been supplying the garden water and its mansion. The main building of the northern end of the garden is constructed in two floors, and on the south side there is a rectangular south-north yard with two water ponds in the middle of the yard, whose ruins still remain about 30 meters from the east side of the main four-seasoned building, which is placed on a coherent and square floor plan (Mehdinejad and Sadeghi Habibabad, 2015: 3). This garden, with its architectural design, has a special beauty and is the pattern of the shahzade Mahan garden. An eye-catching facade, a magnificent vault, and a pond with fountains make the space pure (Golabzadeh, 2011: 178). The existence of distinctions with the Iranian garden pattern, along with the maintenance of its characteristics cause the distances of the Fathabad garden from the Iranian garden's pattern (Mansouripanah and Harandizadeh, 2016: 8). This garden is rectangular and is located with an approximate size of 260 by 440 meters, with an extension in the direction of southwest - northwest on an appropriate slope of the earth. There are subtleties and special features in the construction of the Fathabad garden. The main complex has two gardens, which are in U shape. The main building of the central mansion with two south wings forms the core of the complex. On the northern side of the main building, there was a superstructure in the shape of L (building and garden), which today is generally ruined (Khabazi and Malike, 2016: 3). Fathabad garden has been hosting various activities such as accommodation, outing, harvesting, holding ceremonies and celebrations, etc. (Soltanzadeh et al., 2014: 68). Fathabad garden represents a period of architectural boom, and especially is representing the decorative culture of the private gardens of that period in decorating, with all the strengths and weaknesses. Lack of scientific studies were carried out about the Fathabad garden, without any significant evidence, except a few photos of Skype, some references to historical books and aerial photographs. Restoration of the Fathabad garden of Kerman is, one of the most valuable and historic monuments left over from the Qajar era, the outstanding event that has recently been made with the cooperation and efforts of the state institutions of Kerman province, despite many problems such as the abandonment; and the desirable conditions are made the building to survive (Satari et al., 2017: 6).

4. Architectural Motifs of Dowlatabad and Fathabad Garden

In this section preliminary information about two complexes of Dowlatabad and Fathabad were studied. The architectural motifs on the two complexes are based on the motifs seen as: geometry, plant, animal, human, and combined designs. Fathabad garden of Kerman used motifs, which is a compilation of pre-Islamic and Moroccan and Ottoman periods, similar to other buildings of the Qajar. The influence of the Achaemenid and Sassanid motifs, and the Islamic period in the garden motifs is quite clear, and all these are combined with Western motifs (Soltanzadeh et al., 2014). Since the architecture of the Dowlatabad garden in Yazd dates back to the Sassanid period, and have followed the design of the ctespention in the design of the main mansion, so the influence of the Sassanid motifs has been used in both complexes. It should also be noted that geometric motifs are used in both complexes and animal, human and combination designs are seen in the Fathabat

garden complex of Kerman and geometric motifs are seen as original and basic designs in the Dowlatabad garden of Yazd.

4.1. Geometric Motifs

This group of motifs applies in both gardens. The decorative and repetitive geometric roles that have been created with complete accuracy and beauty in the works of Iranian architecture represent the Iranian knowledge of geometry and the familiarity of these people with geometric features and their scale and relations with each other. The geometric consciousness and the level of knowledge of ancient Iranian engineers and the knowledge of geometry can be clearly seen in their technical work.

The rich ancient tradition of Iranian geometry has survived in various ways, and artists and industry professionals have always implicitly shown their geometric knowledge in their artifacts. Geometric motifs are divided into two groups in their traditional arts: 1- Simple geometric 2- Nodes: This group is used more in traditional Iranian architecture, but it is not exclusive and there are also in other fields of traditional arts (Sharifzadeh, 2006: 3-5).

In the architectural decoration of the Dowlatabad garden in Yazd, geometric motifs as regular or irregular and the combination of these motifs, which have a unity and harmony between the components, and the volume, texture, rhythm and symmetrical equilibrium are crafted with wonderful idea and used in all decorations; including the wooden structures of the wind-catcher building and the colored glass wooden sash window (Fig 1).

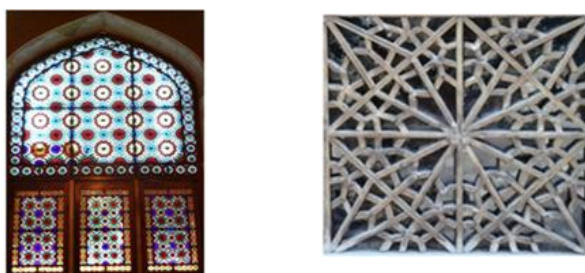


Fig 1 Sash window garden (Source: Author)

In the Fathabad garden of Kerman, some columns are decorated in the section of the gilly and in the upper part or the roof with curved components (altar plan) (Fig 2). A five-row floral semi-circle brick stairs are used only in the seat of the four-seasoned mansion (Soltanzadeh et al., 2014) (Fig 3).



Fig 2 Altar plan (Source: Soltanzadeh et al., 2014)



Fig 3 Semi-circle brick stairs

4.2. Animal Motifs

This motif group has been used in the Fathabad garden of Kerman. Animal designs such as fish and birds (probably lapwing) can be seen (Fig 4). It seems that fish in the motif of this period, or designer's mind had a pivotal role. Considering that fishes are the symbols of the Mediterranean coastal civilizations and at the beginning of Christianity, they were the symbol of rituals of baptism as well as personality of Christ, and the effect of foreign motifs in the Fathabad garden is dominated by the foreign motifs (Fig 5).

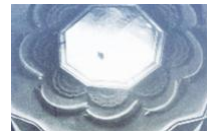


Fig 4 Fish (Source: Soltanzadeh et al., 2014) **Fig 5** Role of the bird (Source: Soltanzadeh et al., 2014)

4.3. Plant Motifs

This group is found in Fathabad garden of Kerman. In the southern facade behind the main entrance (two spaces) with decorations that are more like an Eslimi and an Andalusian fault, these decorations are influenced by carpets. Flowers like Shah Abbasi flowers and Laleh Abbasi have been used in these motifs, but the combination of these flowers with other parts was not common. (Fig 6) (Soltanzadeh, 2007).

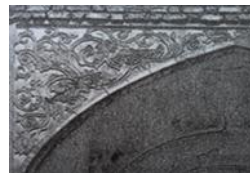


Fig 6 A painting like an Eslimi (Source: Soltanzadeh et al., 2014)

In other parts, the spheres on both sides of the built-in columns have used painting which has the ancient Iranian roots, such as the sun and the sun circle (astral) or locally so-called (wheel), but combining these motifs with certain flowers and leaves represent these design motifs as foreign design. The role of the circle of the sun, its main foundation is from a Broken Cross, related to the fourth millennium BC. The shape of a rectangle in the facade and in the center of which there is a sun and sunflower or a sun circle or azine of Golmihchi, and on either side there are flowers with shaped leaves that are like foreign forms (Fig 7). (Source: Soltanzadeh et al., 2014: 103).



Fig 7 Rectangular shape of sun circle, flowers and leaves (Source: Soltanzadeh et al., 2014: 103)

The decorations cadres in addition to the cross have polygonal shapes or combinations with different curves. Considering the style, it is the foreign form, and most of the cadres have been scallop, half-flowered roses, or curves (Fig 8).



Fig 8 Decoration cadres (Source: Soltanzadeh et al., 2014: 108)

4.4. Human Motifs

This group is used in Fathabad garden of Kerman. One of the first rooms on the eastern side of the building which overlooks the four-seasoned mansion, decorated with paintings of hunting in the mountains and plains. These paintings are not of same size and are like paintings that were seen in Kashan's residential houses in the first half of the 14th century. The used color is a spectrum of brown. The background of painted landscapes are colored with navy blue. The existence of these paintings is probably another reason to bring the building closer to the late 13th and early 14th centuries (Soltanzadeh et al., 2014: 112) (Fig 9).



Fig 9 Human motifs in mural painting (Source: Author)

4.5. Combined Motifs

This group is used in Fathabad garden of Kerman. The decorative motifs inside the building are a combination of plant and geometry animal motifs that have been executed in crusaders and bergamot shape with rings and circles. Cross is one of the main forms of decorating the cadres. In the first mezzanine, and of course in the hallway, a special geometric shape has been used halfway around the skylight, consisting of central concentric circles that comprise the central form, and often made up of rose petals or different forms of fish (in the form of the margin).

The central role in most of these circular motifs is the circle of the Mehr, the Sun, or the star, which in some cases the circle is divided with drawing the radius. Sunflowers and many types of flower buds, cedar and flowers with petals have been used for decorative purposes. There are also real-shape fish in the middle of the motifs around the skylight, which may be reflective of the ponds that either exist or should be existed based on the minds of the artist in the plaster work (Fig 10). (Soltanzadeh et al., 2014: 106).

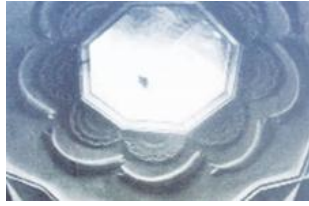
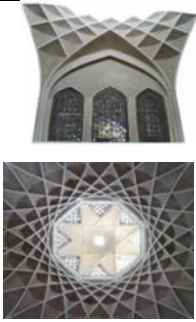






Fig 10 Plant, animal and geometry motifs (Source: Soltanzadeh et al., 2014)



Table 1 Geometry motifs (Dowlatabad garden of Yazd)


Decoration	Location	Motifs	Pictures
Wooden structure	Wind-catcher	Octagonal circular star with 8 wings, motifs with positive and negative space in the wind-catcher	
	Part of the sash window of mansion	Diamond and multiple stars	
	Protective fence	Diamond and square	
Colored glasses	Sash window of the mansion	Diamond, circle and squares and multiple star	

Framing with wire and gypsum plaster	Ceiling of vestibule in mansion	Circle, square, octagonal, solar diamond	
Plaster	Mansion niches	Angled and highlighted	
Brick	Architectural design of main mansion	Polygon	
	Guard tower	Combination of positive and negative space	
Marble	Pond in the mansion	Octagonal	

(Source: Author, 2017)





Table 2 Geometric motifs (Fathabad garden of Kerman)

Decoration	Location	Motifs	Picture
Column	In the upper part of the roof	With curved components (altar plan)	
Brick	Brick stairs of Four-season mansion	Semi-circle, diamond	

Framing	The ceiling of vestibule of the mansion	Astral 18- and 12-sided continuous polygon	
---------	---	--	--


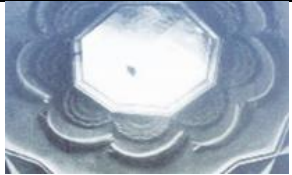
(Source: Soltanzadeh et al., 2014)

Table 3 Plant motifs (Fathabad garden)

Decoration	Location	Motifs	Picture
Plaster	Southern and Eastern facades of the main mansion	Weak geometry	
	Rectangular shape in the façade	Plant, geometry	
	Frame inside the building	Plant, geometry	
Inscription	Main entrance	Plant, geometry with the phrase (God helps us and victory is close)	


(Source: Soltanzadeh et al., 2014)

Table 4 Animal motif (Fathabad garden)

Decoration	Location	Motifs	Picture
Plaster	Façade	Bird(lapwing)	
	Around the vestibule skylight ceiling	Fish	




(Source: Soltanzadeh et al., 2014)

Table 5 Human motifs (Fathabad garden in Kerman)

Decoration	Location	Motif	Picture
Painting on plaster	One of the first openings in the eastern part of the building	Human	

(Source: Author, 2016)

Table 6 Combined motifs (Fathabad garden in Kerman)

Decoration	Location	Motifs	Picture
Framing	Vestibule ceiling of mansion	Geometric, animal (fish), plant	
Painting on plaster	One of the first openings in the eastern part of the building	Human, animal, plant	
Plaster	Façade	Animal(bird),plant, geometric	

(Source: Soltanzadeh et al., 2014)

5. Conclusion

Garden is a place for residential recreation, which has always been attended by people and rulers and artists. And looking at the historical documents of the popular Iranian gardens, they have the most beautiful decorative motifs attached to architecture. Therefore, the two Dowlatabad and Fathabad gardens are the result of the interest of artists from the Zandie and Qajar era to art in architecture. The two gardens have been studied in the area of architectural motifs based on the observed motifs, but the Fathabad garden of Kerman was an unknown and devastating phenomenon, with a few photographs attributed to Skye and few references in historical books and aerial photographs, there was no other significant evidence, and no serious scientific studies were done on it, and the garden was recently restored and renovated, and since it was distanced from the Iranian garden pattern and influenced by Western and foreign motifs and the architectural aspect of its architectural design, it has richness in the motifs associated with the architecture of the garden of Dowlatabad Yazd. The architectural elements of Dowlatabad garden is one of the most original and innovative projects in Iran's official gardens. The geometric designs are used in the decoration of Dowlatabad garden in Yazd. The Fathabad garden of Kerman is a product and representative of a period of architectural boom, and in particular represents the decorative culture of the private gardens of that period. Thus, the motifs have a variety of architectural forms that include geometric, plant, animal, human, combination, and also a combination of the motifs of the pre-Islamic and foreign period, and the effect of the Achaemenid, Sassanid and, to some extent, Islamic periods, is

combined with Western motifs in the garden designs. The findings of the research show that geometric motifs are common motifs which are related to the architecture between the two sites, but with this difference in geometric motifs played a major and independent role in the decorations of the architecture of the Dowlatabad garden of Yazd, but the geometric motifs in the decoration of Fathabad garden of Kerman is both independent and combined with other motifs. Since the Dowlatabad garden architecture dates back to the Sassanid and design of main mansion has followed the design of the Ctesiphon, so the influence of the Sassanid designs in both complexes has been used. Geometric motifs have been used as the basic and original designs in the architecture of Dowlatabad garden in Yazd. The geometry, plant, animal, human and combination designs have also been used in the architecture of the Fathabad garden of Kerman.

References

- Afsharsistani, I. (1999). *Recognition of Yazd Province*. Tehran, Hirmand publications.
- Bahadori, M. (2008). *Wind catcher, Iran's engineering masterpiece*. Yazda publisher.
- Daneshdost, Y. (2015). *Appearance of the Persian garden*. Kalhor publication.
- Gholami Rostam, N., Bemanian, M., & Ansari, M. (2015). Gestalt in designing plan of Iranian garden. *Journal of Jelve-e-Honar*, (1), 63-72.
- Golabzadeh, S. (2011). *Kerman in the mirror of Tourism*. Sixth Edition, Iranian graphic printing, Vali Publication.
- Javaherian, F. (2004). *Iranian gardens, old wisdom of new perspective*. Tehran museum of contemporary art, and Visual Arts Development Institute.
- Khabiri, S. (2014). *Yazd from another perspective*. Artakava publications, Yazd.
- Khabazi, M., & Malike, R. (2016). The role of geomorphic and natural factors in land allocation in the location of Fathabad garden in Kerman. *National conference on earth's future survival, focusing on climate in agriculture and environment*, 1-7.
- Masouripannah, N. & Harandizadeh, M. (2016). Examining the fundamentals of differentiation and similarity between Shazdeh garden and Fathabad garden of Kerman from the view point of the Iranian garden pattern. *International congress on civil engineering, architecture and urban development*, 1-9.
- Mehdi Nejad, J. & Sadeghi Habib abad, A. (2015). Shazdeh garden of Mahan, the child of biglarbeygi garden Fathabad of Kerman. *The First Scientific Conference on New Horizons in Geography and Planning, Architecture and Urban Science of Iran*, 1-10.
- Modarres, A. (2014). *Yazd architecture, yesterday, today, tomorrow*. Yazda publication.
- Pourjaffar, M., Rostami, S., Prjafar, A., & Rostami, M. (2013). The manifestation of Quranic concepts: in Persian garden with an emphasis on Enasn Sura, case study Dolatabad garden. *Journal Interdisciplinary Quranic Studies*, 7-22.
- Pourmand, H., & Keshtkar ghalati, A. (2011). The analysis of essence causes in Persian garden. *Journal Honarha-e-ziba memari-va-shahrsazi*, (47), 51-62.
- Satari, M., Nazariie, N., & Karimi, F. (2017). Review on the repairs in Fathabad Kerman, based on the Florence. *International Charter, International congress on civil Engineering, Architecture and Urban Development*, 1-12.
- Sharifzadeh, S. (2006). *Design of Geometry*. Iran printing & publishing company.
- Soltanzadeh, M., Hashemi nejad, A., Ashraf Ganjooie, M., Keshavarz, M., & Golcheen, H. (2014). *Fathabad garden history and architecture*. Shahid Bahonar University of Kerman publications.
- Soltanzadeh, M. (2007). *Research delineatin Fathabad garden*. Country cultural heritage.
- Tavakoli, J., Jamshidi, M., & Dehghani ashkzari, A. (2004). *Mason forty*. Norgostar publications, Yazd.
- Wilber Donald, N. (2005). *Iranian gardens and its palaces* (S. Mahin Dokht, Trans.). Scientific Cultural Company.