

## **Pakistani Tile Mosaic Work: A Remarkable Ornamentation in the Contemporary Mosques of South Asia**

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### **ABSTRACT**

Classical architectural decorative technique such as mosaic work has been practiced in all over the world. Buildings are carefully designed to reflect the character and tradition of the region. In present research an attempt has been made to explain the significance of tile mosaic work with traditional motives and stylized conceptual representation in contemporary mosques of Punjab, Pakistan. The mosques present traditional and modern phase of decoration in Pakistan with aesthetic values. The study explains geometrical designs and stylized symbolic interpretation through the tile work of contemporary mosques of Pakistan. Conceptual, symbolic and abstract representation of mosaic work of Faisal Mosque Islamabad, arabesque and islami designs of Ali Hajvery Data Darbar Mosque Lahore, geometrical designs and their significance in Jami' Mosque Defence Lahore, Bahria Town Mosque and Masjid al-Habib Lahore Cantt, are the major areas covered in the paper.

**Key Words:** Tile Mosaic, Motives, Stylized, Abstract, Arabesque.

### **Introduction**

South Asian Islamic architecture has strong perspective of architectural decoration in constructive form and implementation of decorative elements to adorn the surfaces of monuments. Tile mosaic work is one of the traditional techniques used by the artisans of the region. Pakistan has profuse history of the application of tile mosaic work with a variety of designs, and ways of manufacturing influenced by the techniques introduced by Persian potters such as; enamelled tiles, lustre tile, under glaze, over glaze, cuerda seca and poly chromatic tiles in splendid colour schemes, are classified by simple methods. Tile mosaic work of contemporary mosques of Pakistan portrays exclusive design patterns and creative conceptual approach, such as tile mosaic work of Faisal Mosque Islamabad, Ali Hajvery *Data Darbar* Mosque Lahore, Behria Town Mosque Lahore, Defence Mosque Lahore and Masjid-al-Habib Lahore Cantt. Surface decoration of these mosques has unique ornamentation belongs to innovative ideas, floral and rectilinear geometrical designs with historical perspective.

## **Historical significance of tile mosaic**

Mosaic work as surface decoration has been practiced since primitive times. In this ancient technique an exquisite composition is created with several multi-coloured small fragments of glass, glazed or unglazed tiles, marbles or any hard material embedded in the adhesive material or mortar properly designed according to the requirement of the place. The fragments cut into triangular, rectangular or square shapes are termed *abakiskoi* by the Greeks and *tesserae*, *abaculi* or tessellate by the Romans. The technique is based on direct implementation of tesserae and colours are not amalgamated or mixed. However, they are demonstrated individually. Usually mosaic work is divided into two basic categories in broad-spectrum; first is mural mosaics and the second is pavement mosaics. The first one is for walls, ceilings, arches, and columns' decoration and the other is applied on floors, pools, and table top.

Traditionally, mosaic has direct association with inlay work. At first the Sumerians introduced the technique in the form of pebble-mosaic and stud-mosaic. Enamelled veneers in red, black and white colours were used for cone-shaped studs. However unglazed tiles in embossed and engraved texture were in practiced for Mesopotamian architectural decoration. The Ishtar Gate, on the busy street of the Babylon built in 6<sup>th</sup> century B.C, two parallel huge walls with the frieze of different walking poses of lions and dragons in relief form with polychrome glazed brick and tile mosaic work shows lively appearance of the technique with dark blue, white and yellow colours. At first architectural ornamentation with glazed tiles in embossed and relief form was applied by Mesopotamians and ancient Egyptians. In both civilizations, beside architectural decoration glazes were also used for pottery, and usually in blue colour. According to R. Nath, in Egyptian civilization glazes with coated veneer were famous before 4777 B.C. Glazed mosaic work was used for the decoration of stepped pyramid at Sakkarah, built in 4155 B.C. and Multi-coloured glazed tiles for Tell-i-Amaraha, dating from 1550 to 1400 B.C. (Nath, 1989, p. 9). Splendid examples of glazed tiles and bricks in various colours have been observed in the Assyrian, Persian and Babylonian architectural decoration. Multi-coloured glazed brickwork was introduced by the Assyrians and later on developed by the Neo-Babylonians, and the tower of Babel built in 605-562 B.C is the prominent example of the application of this ancient technique (Fletcher, 1963, p. 70). The palace of Sargon-II at Khorsabad, built in 722-702 B.C. was well known for its coloured glazed bricks ornamentation (Fletcher, 1963, p. 73). In Persia, architecture during Shalaneser III dated 859-824 B.C decoration with glazed brick panels show splendid example of the period (Fletcher, 1987, p. 74).

In late 5<sup>th</sup> century B.C. the Greek buildings were decorated with mosaics in natural coloured pebbles having creative designs on the floor. Later on, in 3<sup>rd</sup> century B.C, the *tesserae* mosaics were used to adorn the surface and small fragments of stone, marble or glass were slit according to the requirement of shape and size, and imbed according to the form in different shades and intensities of

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colours. The Romans also adopted and promoted this technique, which was later on called tessellated mosaic. In Hellenistic period metal strips were used for the outlining of *tesserae* mosaics. But in the beginning of Christian era this technique died and no one was interested to adorn the surfaces with it (Grabar, 1964, p. 5). For the decoration of the Roman architecture opaque marble *tesserae* was preferred, comparatively Christian applied sparkling reflected glass *tesserae* for mosaic work. In Greek and Roman civilization, mosaic decoration with pebbles and *tesserae*<sup>1</sup> were well-known.

Greco-Roman tradition of mosaic work was adopted for the Byzantine architectural decoration. They preferred coloured glass *tesserae* instead of marble. They also implemented gold and silver coloured foils of metal with precious and semi-precious stones for special effects, and marble were set between the layers of flawless clear glass.

Decoration with mosaic work is considered as a vital part of Muslim architecture. For the construction of earliest Muslim architecture Byzantine architects, artisans and craftsmen were hired; because of their expert input, early Muslim architecture directly influenced with Byzantine art. Consciously, figurative artwork was avoided and required surfaces were adorned with vegetative, floral motives and geometrical designs were preferred for the decoration of religious monuments. Usually, glass *tesserae* were applied for mural mosaic and marbles and stones for pavement mosaic. The interior and exterior of the Dome of the Rock at Jerusalem built in late 7<sup>th</sup> century was decorated with mosaic work. The expert artisans of Kashan in Persia replaced its original mosaic work of outer walls and applied Kashi tiles in 16<sup>th</sup> century (Landay, 1972, p. 116).

For the decoration of early Muslim monuments polychrome mosaic work was preferred, which was called *fusafisa* (Creswell, 1958, p. 44). In 8<sup>th</sup> century Egyptian potters invented Lustre technique, and at first lustre tiles were used at Sāmarrā in Iraq for the surface decoration of *mīhrāb* in 9<sup>th</sup> century and for the Mosque at Qairawān in Tunisia built in 862-863 (Creswell, 1958, p. 296). From the 11<sup>th</sup> century onwards, in most Muslim countries glazed tile work was preferably used rather than mosaics and gradually they developed their own style of decoration (Petersen, 1006, p. 195). Mamlūk artists generated diverse designs of geometric patterns with triangular, rectangular and star-shaped marble pieces of different sizes.

For the interior walls of Turkish Saljuq monuments artisans used under glazed tiles in triangular, rectangular, hexagonal and square shapes. In the 13<sup>th</sup> century, Kashan in Persia underwent evolutionary change and came forward as momentous place for tile manufacturing in sheen gloss and relief or embossed moulded tiles.

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<sup>1</sup> An individual tile usually in the shape of a cube

Several examples are witnessed for the application of innovative designs creating attractive artwork.

### **Tile mosaic work as a part of decoration of the mosques of Punjab, Pakistan**

Beside splendid art of tile work in foreign countries, Pakistani contemporary Muslim architecture is also witnessed for extraordinary contribution towards continuity of classical technique and designs. Innovative design compositions and creative conceptual implementation of tile mosaic work in stylized and abstract form is part of Pakistani tile mosaic decoration as discussed in the following text.

#### **Faisal Mosque Islamabad**

Faisal Mosque Islamabad built in 1987, is a perfect and notable example of tile mosaic work with conceptual representation. The application of tile mosaic work in ablution area has some similar characteristics with *Opus tessellatum* style, because of the application of geometrical designs and tiles. The traditional *Opus tessellatum* is smaller in size than the size used in the Faisal Mosque. The mosaic work with geometric designs is influenced by primitive Romans but in simplified form.

This technique was richly developed in Muslim world with varieties of format and design. Dome of the Rock at Jerusalem, was the first Muslim monument, where glass tiles were applied as mosaic work with variety of geometrical designs. Proper use of glazed tiles was adopted by Abbasid artisans and in 13<sup>th</sup> century hexagonal and star shaped luster tiles were preferably used by Iranians. Iranian and Turkish religious monuments are perfect examples of the creation of symmetrical magnificent designs on polychrome glazed tiles. Such as the Mosque of Gauhhar Shad, Mashad, dated 1419, the Blue Mosque, Tabriz, dated 1465, *Masjid-i-Shah*, Isfahan dated 1612- 1637 and the Friday Mosque, Thatta, dated 1644- 1647.

Tile work practiced in South Asia has direct influence with early style of tile work adopted by Iranian artisans. In South Asian region the Tomb of Shah Yusuf Gardizi, at Multan dated 1150, was the first monument which was decorated with glazed tiles having white background with blue, indigo and turquoise symmetrical designs. (Haider, 1987, p. 51). In Islamic world, tiles were classified by variety of techniques such as simple plain surface technique, *Cuerda Seca*, luster, under and over glazed. But in the Faisal Mosque none of traditional techniques were adopted for its tile manufacturing, the latest Turkish industrial method is applied. Traditionally, the lower parts of the walls (*dados*) were adorned with glazed tile decoration. But in the Faisal Mosque the upper part of the walls are decorated with tiles to adorn the surface rather than lower, which make it unusual and innovative from other monuments.



Figure 1. Tile design in the abluion area of the Faisal Mosque Islamabad.

In the abluion area and its staircases, geometry is applied sophisticatedly with the height of complexity. These patterns symbolize the Islamic concern with continuous symmetrical creation of design patterns with a strong harmonious and careful composition of rectilinear geometry based on vertical, horizontal, and diagonal appearance. A rhythmic sequence is created with the name of Allah written in pseudo knotted *Kūfic* calligraphy in cobalt and cerulean blue tiles. Tile embellishment in the abluion area of the Faisal Mosque has beauty through colour harmony, complexity of design and line.

The triangular walls of the sanctuary of the Faisal Mosque are adorned with various designs in which northern, southern and eastern walls have vertically arranged bands composed with Turkish industrial multi-coloured tiles and the west wall has decorated with the same tiles, but the entire wall is showing symbolic landscape in abstract form. Presentation of tile mosaic is closed to traditional *Opus figlium* and *Opus tessllatum* styles in modern way.

Comparatively the *qiblah* wall in the Bin Madiya Mosque, Dubai, dated 1982-1987, was ornamented with *Kūfic* inscriptions in multi-coloured glass mosaic work (Holod, and Khan, Holod, and Khan, p. 27). In the *Isma'ili Jamatkhana* and the Islamic Centre at Burnaby, British Columbia, Canada dated 1982-1984, the *qiblah* wall is decorated with multi-coloured glazed tiles with floral designs (Holod, and Khan, p. 49-50). All above mentioned mosques are superb examples of modern Muslim monuments and these are contemporary with the Faisal Mosque. Decoration of *qiblah* walls of all these Islamic buildings are a break from tradition and new innovative ideas are implemented for their construction and surface decoration.

In the Faisal Mosque, western wall is centre of interest in the entire composition of the interior of the sanctuary, which dominated through multi-coloured glazed tile mosaic work presenting symbolic landscape and rectangular *Kūfic* calligraphy. Beside decoration these tiles are also offering symbolic importance of colours with the meaningful presence of blessings of God depicting through coloured glaze tiles. These colours are not giving an impact of purposeless

patches; rather the green tiles symbolize vegetation, the blue as sky and chrome orange as followers of God. Verity of Blue colour shade is used in the symbolic mosaic work as sky, which is harmonized with the blue carpet in the sanctuary, for a calm and peaceful ambiance in the mosque. Minor traces of contrasting colours of the tile mosaic are creating dramatic effect. Harmonized and contrast colours with the play of light and dark are creating dramatic effect in this abstract landscape. Such kind of tile mosaic work is not similar with any historical practice of the technique.

Traditional tile mosaic work of mosques had not any symbolic meaning attached to it. Indeed, they were decorated only for the sake of ornamentation having floral realistic design motives, and realistic landscapes were created with polychrome tiles. The mosaic work of the mosque of Damascus is one of the prominent examples of such kind of representation. But in the Faisal Mosque a symbolic depiction of the Divine blessings in abstract form is presented instead of clear visuals of vegetation in realistic imagery.

Figure 2. Western wall of the Faisal Mosque Islamabad.



Multi-coloured glazed ceramic tiles dominate the white of the entire ornamentations of the sanctuary, such as the tile mosaic work of the west wall and polychrome tile friezes on other three walls, blue and white of the carpet give attractive and rich impression to the entire composition. Touches of contrast colours help to discontinue the monotony of white colour, which evolved aesthetics of the entire ambiance.

### ***Jami Masjid* defence housing authority Lahore (Phase I)**

The *Jami Masjid* of the Defence Housing Authority Lahore, constructed in 1988, has bold appearance of pseudo-*Kūfīc* calligraphy on exterior walls but its interior is embellished with glazed composite tile ornamentation properly composed on the piers of ablution area and courtyard of the mosque. Broad semi circular intersecting vaults of porticos rest on squared piers are sheathed with ceramic tiles with floriated decorative bands of quatrefoils in white and royal blue colours. The

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upper cement surface is painted green with white. In each tile central stylized flower has arch like four petals like star with complex floral design in and around all of them like Iranian star shaped floral motives. But here two lines at all four corners mark 90° angle make square with the attachment of four tiles, which make it composite tile design. Its over all composition has similarities with ceramic tiles with octagonal star designs on the piers of the Shaukat Khanam Mosque, Lahore 1994. But in Defence Mosque, stylized motives in simple appearance have no match with historical tile designs. Their royal blue and white colour with the presence of white flat rectangular tiles and pastel chrome green emulation all are giving harmonious impression collectively.



Figure 3. Interior of the *Jami'* Mosque Defence Housing Authority (Phase I), Lahore.

**Tile Mosaic decoration of the Ali Hajwery, *Data Darbar* Mosque Lahore**

Ali Hajwery Mosque well known as *Data Darbar* Mosque, located in the congested area of inner Lahore. It was reconstructed in July, 1981 and the construction was completed in November, 1989, also has an excellent example of tile mosaic decoration. Its northern and southern doors are identical, and in the form of pseudo-four-centred arches outlines in a thin course of black tiles. The walls are covered with faience mosaic designs on several levels: black thin lines forming hexagonal star shapes around black hexagonal centres are overlaid with whirling cobalt blue “spokes” on a cerulean blue background. The design was prepared by the project architects, Naqvi and Sadiqui, but the tiles were made in England because Pakistani ceramics factories were not capable of firing these small tiles at the required high temperature of 1100° Centigrade. The tiles were fixed on the wall by Pakistani artisans under the supervision of the project director.

In the sanctuary the upper part of the western wall has two large arches in pseudo-four-centered or Tudor-arch shape, decorated with tessellated glazed tiles of cerulean blue and white. Each arch is designed in seven concentric rows that create a perspective recessional movement. *Sūra-al Ikhlas* is written seven times in



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white Kufic scrip by the famous modern calligrapher Rashid Butt around the arches. It is western Kufic script, as used at Qairuwan, in Tunisia, in the early eleventh century.



Figure 4. Western wall in the sanctuary of Ali Hajvery *Data Darbar* Mosque Lahore.



Figure 5. Western wall in the sanctuary of Ali Hajvery *Data Darbar* Mosque Lahore.



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Figure 6. Women's Gallery wall in the sanctuary of Ali Hajvery *Data Darbar* Mosque Lahore.

In the Roman period mosaic work was based on the appropriate arrangement of tiny fragments (tesserae) of any hard substance. In this mosaic style, tiles were cut into small pieces, but in the *Data Darbar* Mosque the size of tesseras is larger, about the size of pieces remaining on the famous picture wall of the Lahore Fort. In the Women's Galleries of the mosque, the upper part of every arch is embellished with floriated composite tiles in *Kashi Kari* as are the walls on the eastern and western ends of the galleries. The large arabesques murals are in sea green, white, blue, ochre, orange and red and dominate the area. The design is based on traditional Islamic motive having *islimi*<sup>2</sup> characteristics. *Islimi* was originated in the ninth century under the Abbasids, and is first seen at Samarra in stucco work. The design as applied to the Women's Galleries at the *Data Darbar* Mosque is composed with elongated split leaves in small and large size that sometimes bear other smaller leaves of the same shape in a different colour. The leaves are attached to curling vines. There are also kidney-shaped leaves resembling the Kashmiri *boteh* (paisley) that are overlapped by a stylized floral shape. There is a second layer of design on the *Data Darbar* tiles, of thinner vines bearing rosette-type flowers. It entered the Islamic world from China with the Mongols in the thirteenth. The synthesis of the two designs took place in Iran in the fifteenth century (Timurid period).

The mixture of motifs painted on the ceramic tiles of the Women's Galleries at *Data Darbar* has no real precedent in earlier developments of *islimi* decoration, although the various elements of the design are well known. As early as 1251 the portal of the Karatay Madrasa in Konya shows similar large arabesque leaf ends

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<sup>2</sup> *Islimi* is a style of continuous decoration based on split leaf and vine motifs that can be used to decorate large area.

curling around stems (Hattstein and Delius, 2000, p. 373). In India the decorative piers of the Ala'i Darwaza, Delhi, built in 1311, have such split leaves. In Persia the stucco *mihrah* bearing the name of the Mongol ruler Oljaitu of 1314 in the *Masjid-i Jameh* Isfahan has this type of arabesque pattern, as does the tomb of Amir Husayn of 1376 (Stierlin, 2002, p. 64). The combination of *islami* with Chinese-type designs (*hatayi*) is found on the squinch area of Sheikh Lutfallah Mosque Isfahan of 1603-1619 and on the walls of the Shah Mosque, Isfahan, of 1611. One may suggest that the arresting patterns on the tiles in the Women's Galleries are the work of a modern designer, familiar with typical Islamic designs but who did not respect their traditional proportions and combinations.

### **Mamia Masjid-al-Habib Lahore Cantt**

The tile work applied for the copulas and domical surface of the Jami *Masjid-al-Habib* Lahore Cantt built in 2002, has unusual simplified designs. On the domes of the Jami *Masjid* fascinating approach of glazed tiles in blue colour forming stars on white base is showing contrast in comparison with Mughal decoration of *gul dasta* with foliated patterns, foliage, fruits, tree branches and vine motives.

Beside use of glazed tiles for exterior, interior of the mosque is also adorned with tile mosaic decoration on the shafts of pseudo Corinthian Columns, spandrels of multi-foiled and pointed arches of concave form *mihrah* on west wall indicating the *qiblah* has great impact for surface decoration of the sanctuary. Lower part of the columns are adorned with small tesserae of blue and turquoise glazed tiles each two inches by two inches in size, in cool shades of cobalt, blue green and turquoise. Such kinds of tiles are commonly used for the contemporary mosques of Lahore to adorn the surface of dados and sometime entire wall. There are two types of arches constructed for *mihrah*. Spandrels of the pointed arch in recessed form are covered with blue composite tiles evolving rectilinear geometrical design patterns in cobalt blue colour, while multifoiled arch on it, making double frame with sheath of pastel green self print glazed tiles in olive green colour. Concave surface of the *mihrah* is also adorned with five small pointed arches, also decorated with glazed tiles in two shades of viridian and olive green colours. Their rectilinear geometrical designs of tile work have similarity with the design of spandrels of pointed arch of the *mihrah*, creating connectivity and harmony among design pattern of the area.

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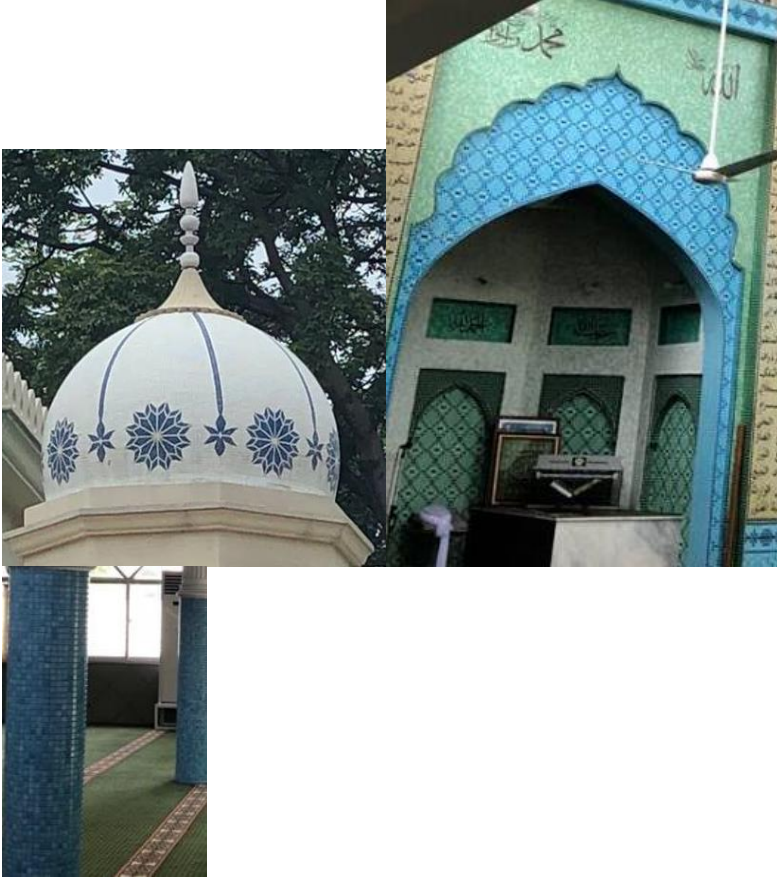


Figure 7. Tile Mosaic work of the Jamia Masjid-al-Habib Lahore Cantt.

### **Bahria Town Mosque Lahore**

Historically, Lahore is considered as hub of tile mosaic decoration since 16<sup>th</sup> century AD. Surface decoration of every time period shows importance of its own. Similarly architectural decoration of contemporary mosques of Lahore is continuity of the matchless beauty of tile ornamentation of the region. The Bahria Town Mosque Lahore built in 2014, represents several traditional decorative elements in modern way and tile mosaic work on its exterior and interior surfaces one of them. The mosque is designed with the combination of terracotta tiles and glazed tiles in different harmonized colour schemes with geometrical design patterns.

Mainly Kashi work is based on two types, the first one has enameled glazed sheath and the secondly, strong terracotta bricks are usually used for external wall cladding of the buildings as used in the Bahria mosque Lahore. External walls of

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the main building of the mosque, friezes on domical structure and domlets, exterior of minarets all are decorated with enamel glazed tiles with the combination of terracotta tiles. The coloured tiles intricate geometrical patterns of exterior and constitute vibrant compositions of extraordinary designs of Kashi tile work in rich verity of blues with Ceruliean blue and Turquoise blue in chief colours and harmonized series of soft orange yellow green, lead glazes of yellow ochre, yellowish-brown and burnt sieana. The coloured glazed tiles are used to break the monotony of the plain surface of terracotta tiles.

Historically speaking in Muslim architecture friezes of turquoise glazed tiles with terracotta tiles were first used by Iranian Seljuks for the ornamentation of the exterior walls of their monument. “The Arabs adopted this traditional art from Iran and used it later to embellish their buildings while spreading it all over the Islamic world” (Gulzar, 2016). The art of glazes was adopted for the ornamentation of South Asian Islamic architecture and the Mughals were the first one who embellished their architectural surfaces with rhythmic combination of glazed tile decoration with variation of design motives. In Bahria Mosque Lahore, decoration with Kashi technique is revived and became an essential component of architectural decoration of the mosque of its own kind.



Figure 8. Tile Mosaic Work of Bahria Town Mosque Lahore built in 2014.

## **Conclusion**

The research shows that tile mosaic work has strong perspective to adorn the surfaces of historical monuments in South Asia. It presents a comprehensive study of tile mosaic work in contemporary mosques of Punjab, Pakistan. At first an abstract representation of the tile decoration in the ablution area and western wall in the sanctuary of the Faisal Mosque Islamabad mentioned. Which shows unique and symbolic appearance of nature in stylized form with variety of harmonized and contrast colours. Artistic expression of nature has strong composition of vibrant colours with rectilinear Kufic calligraphy. Secondly *Kashi Kari* in *Data Darbar* Mosque with composite tile work having arabesque *Islimi* designs and their traditional importance is discussed. Then the surface decoration through tile

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mosaic work of Defence Mosque Lahore, Jami Mosque Lahore Cantt and Bahria Mosque Lahore's tile ornamentation is mentioned, which represent common trends of such kind of decoration in over all mosques of the area with their divers style and stylized designs. So it is observed that tile mosaic work in contemporary mosques of Punjab Pakistan, has importance of its own, having traditional techniques of tile making, revival of traditional design motives, implementation of abstract representation through tiles with innovative ideas. Enamelled tiles, lustre tile, under glaze, over glaze, cuerda seca and poly chromatic tiles in splendid colour schemes, which are classified by simple methods all are used for the ornamentation of contemporary Mosques of the region.

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