



**INVESTIGATING THE MOSQUES DESIGNS AND PATTERNS IN STATE HARYANA,
INDIA: A VISUAL ANALYSIS**

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ABSTRACT

Since their discovery, the architectural image of old Indian temples has fascinated historians. This may be owing to the mystic sensory experience that visitors get when they enter these buildings. Mysticism has been investigated by a wide variety of disciplines, including history, archaeology, art, anthropology, astrology, numerology, and even architecture. These disciplines have focused on either linked myths or textural tenets. Since the beginning of temples' existence till the present day, an enormous shift has taken place in the architectural language used for their construction. Since the late Middle Ages, this language has been decoded mostly in Sanskrit and has been realized with the authenticity that it deserves. It was during the colonial time when many scholarships began making efforts to translate and visually change architectural drawings in an effort to decipher the enigmas that underlie the language of architectural drawings. The study has uncovered, by way of a comprehensive analysis of previous research, the several conceptual frameworks and methodological techniques that academics have used is an attempt to grasp and describe the logic underlying the traditional construction of Indian temples. It has concentrated on the visual frameworks utilised by academics today to investigate traditional Indian temples, as well as the results of this research, as its primary areas of attention. Visual interpretations have shown either mishandled dimensional adjustments or problematic mathematical tendencies, and academic comparisons between the structure and the book have frequently been discovered to be created on shaky grounds. This is due to the fact that the building's dimensions have not been accurately measured.

Keywords: *Mosques Designs, Indian Traditional*

INTRODUCTION

In spite of the fact that the design of mosques all over the globe has been impacted by a wide variety of cultures and languages that have been appropriated from a variety of different concepts, in some way, those mosques have become an important component of the Islamic architecture that is used today. Many different languages have been imposed on the construction of mosques in order for them to take the shape that they do. This has been the subject of a number of studies that have been carried out by researchers and authors who have really brought to light the components of the modern Islamic architecture and its language. The primary issue about the architecture of contemporary mosques is whether or not the design has given the social and cultural demands in addition to the primary language of Islamic architecture. The people needed to be exposed to Islam for the mosque to be built in the first place, and it was also intended to serve as a place for religious and spiritual activities. In Islam, it is vital to build a space that meets the social and religious requirements of Muslims. The mosque is the site where all Muslims assemble to do their Salat (prayer) and social elements, and it is also the place where Muslims interact with one another. The mosque serves as both a symbol and a driving force in Islamic culture; in addition to its primary function of hosting religious services and social gatherings, it is also a representation of the identity of Muslims as a people.

Since it was initially constructed, the mosque has gone through a number of transformations, all of which contributed to the development of its current style, which is now referred to as Islamic architecture and has the mosque as the primary building component. This study's objective is to analyze the most current publications that have been talking about the architecture of mosques in different parts of the globe. It also sheds light on the observations and judgments of other researchers with regard to the mosques in question. As a result of the fast growth of Islamic towns, new structures have been built, and highly developed forms have been emerging to create the life of the Muslim community. When you take into mind that the mosque is the most religious building in the city, you can see why it was vital to establish a holy identity for the place. The most recent research have been delving into a variety of issues relating to the expansion of mosques in nations with Muslim populations as well as in other parts of the globe. Numerous publications have been written that investigate a variety of subjects from a variety of perspectives, including construction, religious, social, cultural, and functional perspectives, among others.

If you have these kinds of things to discuss, you could be able to open the door to a better understanding of the most topical title that researchers have been working on over the last few years. In other words, you might be able to zero in on the features that are lacking and the one that is the most contentious. In this article, a number of papers that have been researched by various writers and that deal with Islamic architecture in general and the design of mosques in

particular have been brought up to be explored further in this study. These papers deal with various aspects of Islamic architecture. In conclusion, the article will assist in contributing information that will provide an insight to the most current research in the subject of mosque architecture and will play a role in doing so. It also helps to develop a record that reveals previously unconsidered factors that need to be taken into account in the investigations that are to come in the future. It is essential to carry out such an investigation, as it will further assist in determining how far researchers are able to cover the aspects of Islamic architecture that are considered to be the most important.

Mosques construction

The Architecture of Mosques or Mosque Architecture: New Conceptions of Bengal" The article "During the Muslim Rule" discussed the recent evolution of religious architecture, namely how the mosque is the most evolved form of this kind of building. It addresses the fast growth of the Muslim community as well as the activity of missionaries at this time as it became highly important to do prayer in an enclosed place in major towns. In addition, the architectural principles of mosques are not spiritually inspired in the cosmic sense; rather, the functionality of the structure is determined not only by its construction but also by the materials that are used in addition to its beautiful design. However, the kind of development that may occur is mostly determined by the existing technologies, the amount of trained labor that is available, the geographical variables, and the materials. According to the findings of this research, the author came to the conclusion that Muslims in Bengal have incorporated their needs and beliefs onto the pre-existing form by infusing it with their own techniques and teaching, and that they have shared this knowledge with the culture from which it originated. El-Amrousi and Biln (2013) spoke about the fast growth in building projects of Abu Dhabi and the strategic plan to describe the economic-cultural development in the Middle East. They focused specifically on Abu Dhabi.

According to the findings of the study, it is extremely important to have an in-depth comprehension of the power held by the city identity as well as the architecture of multi-ethnic communities that combines Islamic arts and crafts. A comprehensive research effort into the history and legacy of Abu Dhabi is required in order to get an appreciation for the construction program. This is necessary in order to construct a one-of-a-kind contemporary metropolis that successfully combines the past and the future. In order to fashion the new religious symbols for this multiethnic metropolis, the form and elements of Islamic architecture were chosen with great consideration. Within the scope of this study, a number of mosques have been analyzed in order to get an understanding of the formation of revival forms in chosen mosques that have not been created by a star architect. This study's objective was to analyze and demonstrate the collage artist activities in the Emirates that contribute to the consolidation of a feeling of community that is anticipated to exist there. In their work named "Studying the Effect of Jame Mosque of Yazd;

Blue Mosque of Tabriz; Goharshadjame Mosque," Saremi Naeeni and Yasoori (2016), Continent on Three Important Mosques from the Timurid Period. analyzed the three mosques in Iran as the case study for their research. The mosques are located in Tabriz, Yazd, and Goharshadjame, respectively.

It was asserted there that the revolution of Islamic architecture had begun at the commencement of Islam and continued until it was finished during the Timurid dynasty. In order to comprehend the shape of such Islamic monuments, the papers focused on three primary aspects: the structure, the geometry, and the ornamentation. The articles also took into consideration political and climatic aspects of the subject. Tabriz's Blue Mosque, Yazd's Jame Mosque, and Goharshadjame's Mosque have all been researched using an analytical approach; nevertheless, tables have been utilized to describe the conclusions from examining those case studies. Furthermore, the methods that have been employed is comparative and case study. In conclusion, the findings of this research showed that each mosque was constructed in accordance with the location in which it was located, with climatic considerations being taken into account, despite the diversity in the design of those mosques.

OBJECTIVES

1. The Study Investigating the Mosques Designs and Patterns.
2. The Study the Architectural Image of Indian Traditional.

RESEARCH METHODOLOGY

In this research, both traditional and contemporary mosques were classified using a four-step method that was based on the typo-morphological qualities of the mosques themselves. Throughout the processes, a variety of approaches have been used, beginning with a complete overview to demonstrate how the architectural style of mosques has developed over the course of time. The architecture of traditional mosques has been grouped together into a single category to show the similarities that can be seen throughout a wide range of mosque types. After that, we looked into additional sub-classification in an attempt to improve things. This research adhered to the principles of grammar by conducting a morphological analysis of the components in order to come up with a prototype categorization of mosques. Using graph-based pattern recognition, the overall form and layout of mosques have, at long last, been compared to the prototypes of the most fundamental kinds of mosques.

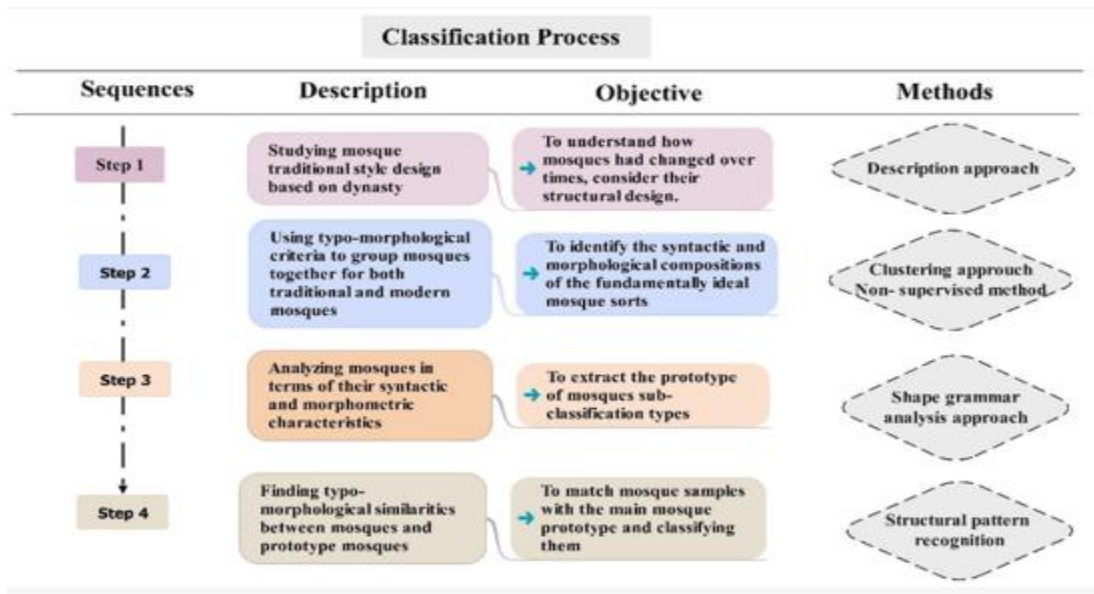


Figure 1. Mosque classification process

On the other hand, unsupervised hierarchical clustering was used to a large dataset of current mosque designs. This was done in order to find patterns among the designs. This is done in order to bring attention to the fact that mosques can be grouped together with other buildings that share the same syntactic and morphological characteristics. At the end of the day, they may be broken down into one of two primary categories. The first kind is comprised of non-basic forms, which are those that are not drawn from the styles of traditional mosques, while the second type is comprised of basic shapes that are present in traditional mosques. In other words, the emphasis of the recent study has been on determining the degree of continuity present in the conventional kinds.

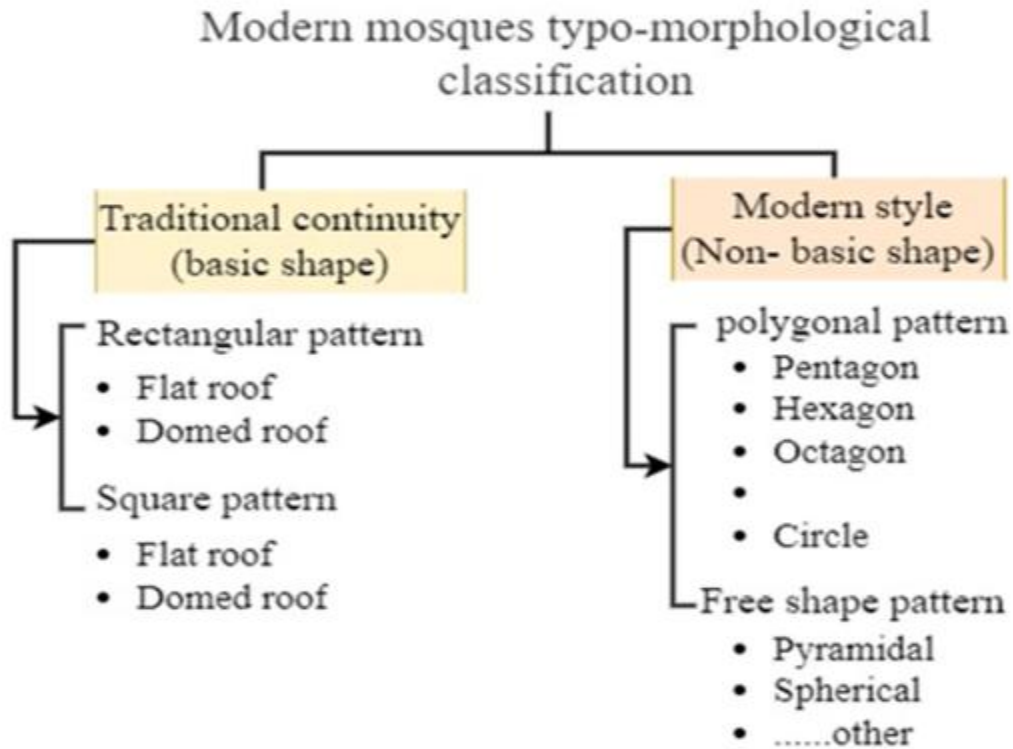


Figure 2. comparing the syntactic and morphological content of contemporary mosques to form clusters.

DATA ANALYSIS

The categorization of mosques was made possible by a descriptive investigation of the syntactic and morphological makeup of mosques. This was subsequently followed by the application of four separate phases of methodology, which ranged from the construction of the first mosques to the creation of the most cutting-edge designs in use today. The first step in this procedure is to examine the architectural development of mosques throughout history, beginning with mosques in Islamic cultures and concluding with mosques in Ottoman cultures. Second, the five primary categories of mosques are analysed in terms of the relevance of the typo-morphological architectural characteristics that differentiate one kind of mosque from another. There are several various styles of structures, including the hypostyle, the Iwan, the central-domed, the multi-domed, and the triple-domed with a vast courtyard. During the third phase, twenty prototypes are constructed by extrapolating from the five basic groups that were found during the second phase. Additionally, another method of contemporary classification is used. These models are derived via an investigation of the texts, which was then guided by grammatical theory.

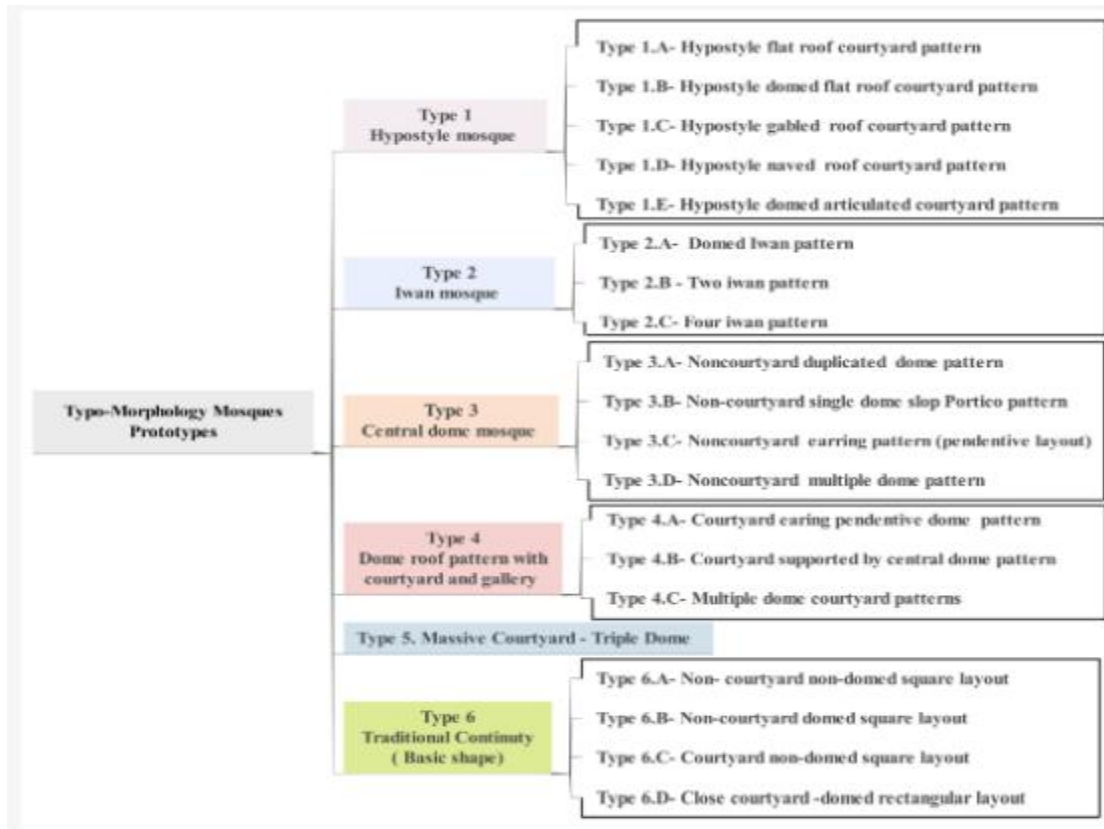


Figure 3. prototypes of mosque typo-morphology.

In the last stage, graph-based pattern recognition was used to make a comparison of the twenty recovered mosque prototypes to a collection of sample mosques that each had their own set of distinctive typo-morphological traits. This is reflected in the

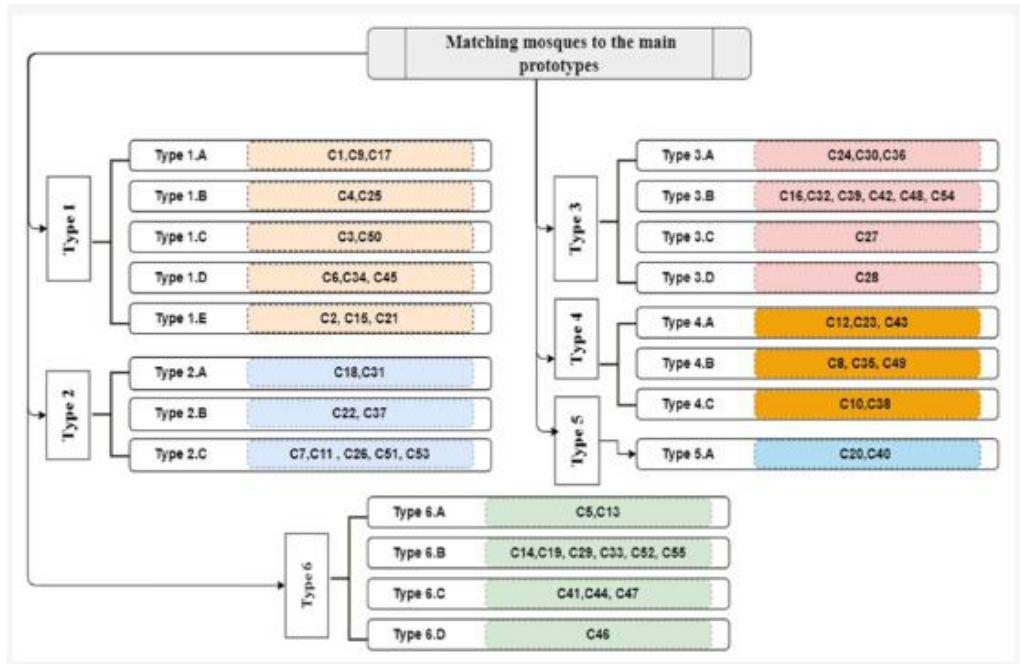


Figure 4. classification of the chosen mosques by comparison to the primary prototypes.

CONCLUSION

Particularly the field of indology. The study of the traditional temple typology in India has uncovered a variety of research frameworks and points of view, which has opened the door for further investigation into the architectural pattern language that is inherent in holy building. It is common known that the review concentrates only on the examination of the visual framework rather than the examination of the textual content. It is not quite evident that all practicing architects in India are familiar with architectural principles as opposed to only the practices of architecture. Without a certain, not all of the temples that are still standing correctly exemplify the ideals that were used in their building. Meister made the following observation: The investigation did uncover, however, that a good number of temples demonstrate some grasp of the ideas for applying the Vastu Mandala grid to the construction of the temples. According to what has already been said by Krishna Deva, "the known examples follow the texts closely in the varieties of the plan and generally in composition and elevation, but differ in details of measurements and proportion." The prayer hall, also known as the haram, is the primary emphasis of the design of any mosque. A classification is, in its most general definition, a collection of boxes in which things that belong to the same class are sufficiently similar to one other, and those that belong to separate classes are enough dissimilar from one another. The majority of the published research on mosque architecture focuses on the study of its history as well as the analysis of its various architectural layouts and patterns using a variety of distinct categories.

REFERENCES

1. Okuyucu, S.E. Evaluation of spatial fictions, design concepts, aesthetic quests of traditional, modern mosques from past to present and the analysis of mosque samples. *Civ. Eng. Archit.* 2016, 4, 54– 66.
2. Macaulay, D. *Mosque*, 1st ed.; Houghton Mifflin Harcourt: Boston, MA, USA, 2008.
3. Farrag, E. Architecture of Mosques and Islamic Centers in Non-Muslim Context. *Alex. Eng. J.* 2017, 56, 613– 620.
4. Othman, R.; Inangda, N.; Ahmad, Y. A Typological Study of Mosque Internal Spatial Arrangement: A Case Study on Malaysian Mosques (1700– 2007). *J. Des. Built Environ.* 2008, 4, 41– 54.
5. Khan, H.U. The architecture of the mosque, an overview and design directions. In *Expressions of Islam in Buildings*; Salam, H., Ed.; Concept Media/The Aga Khan Award for Architecture: Singapore, 1990; pp. 109– 127.
6. Hussein, K.A.; Ismaeel, E.H. Shape Grammar Strategies for Representing the Built Heritage. *Al-Qadisiyah J. Eng. Sci.* 2020, 13, 189– 199.
7. Hoag, J.D. *Islamic Architecture: History of World Architecture*, 1st ed.; Rizzoli Intl Pubns: New York, NY, USA, 1 January 2004.
8. Munes or Monis, Hussein “ Mosques” ; World of Knowledge series; National Council for Culture, Arts and Literature: Kuwait City, Kuwait, 1981; 37.
9. Khachan, L. Form and Function of Northeast Ohio Mosques. Master’ s Thesis, University of Akron, Akron, OH, USA, 2008.
10. Hakim, N. Mosque Architecture Past and Present. In *Sacred Buildings: A Design Manual*; Birkhäuser Verlag: Basel, Switzerland, 2008; pp. 46– 53.
11. Alkhaled, Z. Contemporary Mosques: Conventional and Innovative Approach in Mosque Design at Turkey. *J. Des. Studio* 2019, 1, 37– 44.
12. Hillenbrand, R. The mosque in the medieval Islamic world. In *Architecture in Continuity*; Aperture: New York, NY, USA, 1985; pp. 33– 51.

13. Taher, A.N. Common Phenomena in Mosque Architecture: An Inductive, Comparative Study of the Axis in Religious Buildings. Master' s Thesis, Department of Architectural Engineering, University of Baghdad, Baghdad, Iraq, 1994.
14. Aazam, Z. The social logic of the mosque: A study in building typology. The social logic of the mosque: A study in the relationships between building typology and urban morphology. In Proceedings of the 6th International Space Syntax Symposium, Istanbul, Turkey, 12– 15 June 2007; Volume 58, pp. 1– 18.
15. Jahić, E. Stylistic expressions in the 20th century mosque architecture. Prost. Znan. Časopis Za Arhit. I Urban. 2008, 16, 2–21.