

KEY WORDS:

History, precedents, Design studio, Siddhpur, Bohrawad

Urban Insert in a Heritage Neighborhood in Siddhpur

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ABSTRACT

Study of history helps to evolve an architectural insert in a Heritage Neighborhood, emphasizing history as a channel to creative thinking, with specialized research on precedents. An understanding of precedents can offer valuable insights to students about cultural, technological, aesthetic and philosophical parameters, measured during the conception of the building and the settlement. An Architectural Design Studio when pre-mediated with history makes the students aware about the heritage and physical parameters like geography, construction technology and socio-cultural parameters. Its objective is to initiate creativity through the analytical study and to provoke design. The paper illustratively demonstrates the methodology and output in the Architectural Design Studio, when influenced by the local history and context. It presents research based upon the students' work of Second Year Design studio of Bharatiya Kala Prasari Sabha's College of Architecture (BKPS COA) and the relationship between history and design.



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1. Introduction

Some design projects may have a research footing and the outcome in the design studio may be taken forth from the research. Learning in studios can be conducted in two ways, based on a project or on a problem (Saghafi, 2021). A pedagogical model focuses on learning through problems where students gain knowledge through content under the area of study.

Real life situations and case studies help to gain insight in the problem areas for their academic project. Problem-based learning in the architectural design studio is an important approach in architecture pedagogy. Because of this method, we can have the three important basic skills: complex problem solving, critical thinking, and creativity (Adiyanto, 2017). Hence young designers need to approach the designs, looking at the context and concerns such that the design becomes the solutions of those.

At the onset of the Second Year Design studio the students were initiated to study history and the insert was evolved as the call for a heritage city. For this study, the students examined the Bohrawads or Bohri Settlements at Siddhpur, a town in Gujarat. It has been observed that Siddhpur has been influenced by Europe as an outcome of trading, being their major occupation. The student's output was then content analyzed by a team of experts, on precedents, art, culture and architecture of the Heritage City.

The aim of the paper is to understand the Architecture of Siddhpur and explore an Urban Insert in the Heritage Neighborhood. The Objectives of the paper is to document the studio methodology that explored relationship between history and design. The basic steps were: History of Siddhpur was content analyzed, an Urban insert in the Heritage Neighborhood was explored, revival of this heritage Corridor as a new tourist destination, bringing the Architecture of Provincial Gujarat on the map of India. The design outcome of the students was reviewed by a team of experts and various approaches to the same were demonstrated in the studio. It was an outcome of Case Study Method used as a guideline in the Design Studio.

Inclusion of History in Design Studio

History is understood with respect to time, space and people. The construction technique, style, material of the tangible heritage makes the experience of any historical monument awe inspiring. The historic architecture that constitutes manmade heritage can assist to decode the past and establish a rapport with the viewer making it communicative and interactive in the present. Historic architecture is timeless because even after functional obsolescence these master pieces mesmerize the observer through scale, size, volume, degree of enclosure, illumination levels and decorative motifs observed on and in the monument. The perception of viewer is affected by the spatial features and organizational principles which govern the form of the building. The elements that administer the form of these monuments evoke in an observer an ethos appropriate to that space. The scale, size, volume, degree of enclosure, the levels of illumination, motifs observed in the monument

rendered by all elements, establish a rapport with the observer and hence become communicative and interactive. These structures which constitute the manmade heritage can assist to decode the past and reinstate the beliefs of the people in the present.

Need for the Research

Some architectural institutes and publications have played an important role in initiating history as a channel for design education. Learning from history helps to identify the difference between copy, paste and replicate. It is begun by and individual copied by the elite and received by the mass. This becomes a part of culture and an integral part of history.

According to Anthony Antoniodes (1979), history when used as a channel by a designer will include:

- Reference to a regional historical prototype
- Reference to a universal prototype
- Reference to historic types which are distant or in proximity
- Rounded examination of a historic model
- Critical analysis of in the selection and kind of the historic model (Theory of design, Pg. 154.)

Architect Michael Graves who held the use of history and precedents in his buildings, wrote that ***“There is a bias or a point of view through which an architect looks at his precedents”***. According to Antoniadis, and Alvar Alto is a leading example of using history in design. (Antoniades, 1979). Knossos, Alhambra and Genera life of Granada are some of the historical precedents of research.

Broadbent in his book Design in Architecture (1973) elaborates that design can be taught as --

Iconic Design: Where a characteristic icon adopted and repeated in a civilization.

Ana logic design: Preservation is powered through historic buildings.

Canonic Design: A geometric system or a proportioning system is adopted in buildings based on human anthropometry like modular man by le Corbusier.

Historicism examines the form or the outward appearance of a building whereas history observes the cultural, technological, social and philosophical parameters that belong to a period of architecture. In this paper study of historical buildings and precincts were conducted which became important pointers to define a culture of Siddhpur. It is thus

useful for the students to integrate the knowledge from the supporting subjects like History in the subject of Architectural Design to get a better understanding of the ethnicity

This paper demonstrates an attempt to incorporate the opinions of Savitribai Phule Pune University, COA Gazette and the UNESCO Charter (2011).

The undergraduate curriculum of Architecture stresses upon a Historical Context Design Solution. As per the Savitribai Phule Pune University's (SPPU) course outline it has been stated the following- *'Study of a Settlement of a semi urban type in an urban location and the examination and documentation in context of their lifestyle of residents, climatic and topographical considerations, semi-public built and open spaces, and related built character'. It focuses on indigenous applications in the Design subject. (SPPU B. Arch 2015 pattern)*

The curriculum of history of Second Year B. Arch constitutes the study of Indian History encompassing broadly the Islamic and Hindu styles also a part of provincial Gujarat style of architecture. The Council of Architecture Gazette (COA) 2006 has specified in the subject's description of History and Humanities where the focus is on study of Style of Architecture, Sociology, Economics and Culture as applicable for human settlements.

One of the Objectives of architectural education by The International Union of Architects (UIA) The United Nations Educational, Scientific and Cultural Organization (UNESCO) Charter (2011) mention about mindfulness of responsibilities toward fellow human beings, social, cultural, urban, architecture, and environment which constitute the architectural heritage.

Considerations mentioned in the UNESCO-UIA Charter for Architectural Education (2011) specify-

- *to ensure that architects are able to comprehend the regional characteristics and to give practical built appearance to the needs and outlook of the user to improve the quality of life of an individual, groups, communities and settlements.*
- *methods of education and training for architects is diverse in order to impress cultural richness but permit flexibility in the advance of the curriculum to incorporate to the changing demands and requirements.*

2. Methodology

When an architect appreciates historic buildings, he also investigates it for design purposes. According to Antoniades Anthony, in his book *Theory of Design* (1992), an inclusive study of history would combine analytic and synthetic endeavours taking an overview of all the parameters of the historic building.

A vectorial beginning to design can be accomplished when theory learnt explicitly or implicitly and the experiences are premeditated together in a Design Studio. A qualitative

paradigm was adopted to understand and explore the student's outcome when knowledge gained in History was intended in the Architectural Design Studio. The application of the theory learnt is explored in the design outcome of Architectural design.

The principal objective of the research was to investigate the reflection of knowledge gathered in History in the Architectural Design Assignment. Case study is the most commonly used method in Architecture Colleges before starting any Architectural Design (Groat & Wang, 2002). A settlement study was conducted by the the Second year BKPS College of Architecture, Pune (India) 2019-20 batch students at Siddhpur, Gujarat as a part of the Savitribai Phule Pune University Architectural Design syllabus.

The students were initiated to study the regional history of Siddhpur in the district of Patan Gujarat. An understanding of regional precedents can offer invaluable insights to students about cultural, technological, aesthetic and philosophical parameters that prevailed during the creation of the *Bohra* mansions. In this case study approach, students studied the morphological aspects of streets, houses, façade design, existing scenario and the potential for a design insert in the existing residential context of Siddhpur. Primary data collection and inventory was completed during physical trip along with the design faculty, supported by live sketches, photos and observations of one residential street and commercial "market" street. The analytical Endeavours included the study of existing Architectural measure drawings from existing available resources. The socio-cultural context integrated with the study of culture and lifestyle of the people. Data was also collected through non-structured interviews with tourist guides and residents. This study helped to appreciate the interior and exterior spaces of a historic building. A design insert in the studied Commercial Street at Siddhpur was identified and a design proposal was submitted by the students.

The output was content analysed by a team of experts and the students were interviewed about their approach and process of design. Outcome of the design project of students in which students employed the learning from the history and architectural features of one town Siddhpur is presented in this paper. Architectural expressions of students post the settlement study were analysed by studying similarities or differences if any. Following section of the paper describes the pedagogic outcome and application of the design. This paper explains the process and outcome of the undergraduate architectural design studio of Second year.

3. Study Area – Siddhpur and its Bohrawad

Setting of the Study

Siddhpur 114 kms from Ahmedabad, is a small town in the Patan district on the banks of *Saraswati* River. Siddhpur town falls in between the tourism circuit of Ahmedabad-Modhera -Patan. It was historically important as a holy place and was named as Siddhpur after the great Solanki ruler King Siddharaj Jaisingh. Siddhpur town is located on the left bank of Saraswati River known as a sacred town i.e., "Siddha" means holy, pure or sacred. That the great warrior *Parsurama* performed the last rites of his mother, making Siddhpur

a holy pilgrimage among Hindu devotees. Siddhpur has come to be known as the Kashi (Varanasi) of the West. Many magnificent buildings thriving even today are attributed to the King Siddharaj who continued the construction after his father. There are many historically important tourists' destinations in Siddhpur. Raja Siddharaj Jaisingh completed building the 'Rudra-Mal' after the Solanki king Mul Raj now known as 'Rudra Mahalaya' in 12th century AD around which the town developed. After this the town which was earlier known as Sri-sthal started being called as Siddhpur (Dosabhai, 1894). He not only built the Rudra Mahalaya but also palaces, Sahasra-Ling, caravansaries, and reservoirs. With the introduction of railway line and highway the settlement developed around it. Bindu Sarovar in Siddhpur is one of the sacred lakes in India. Few important landmarks of the town are Clock tower, the house of 360 windows, Zaini *Masjid* complex, water tanks, Kazi Khan Dargah and Kapil Mahamuni Ashram (Deshpande, 2017).

Bohra Community of Siddhpur

Siddhpur a political and a trade Centre, an important town of yester years has been ground to some of the buildings built by the Gujarati Dawoodi *Bohra* trading community. The Dawoodi *Bohras* a trading community thrived in Siddhpur from the 1820s to the 1930s which impacted the Architecture of Siddhpur. Bohra is term derived from 'Vehru' or trade in Gujarat. (Cortes, 2015). This Gujarati Community ventured into India to East Africa in the 19th and 20th century from Yemin. (Murray, 2017) *Bohra* settlements in Gujarat Dawoodi *Bohras* are the traders, and are the converted Shia Muslims who spread in Gujarat and neighboring states. In India, many Hindus converted into *Bohras* and retained many of their past beliefs and customs. Thus, in popular culture the boundaries between religions were more flexible. *Bohras* subscribe to the fundamental doctrines of the *Ismaili Shia* faith. They were open for new ideas in terms of cultural inputs, clothing, and architecture. Dawoodi *Bohras* have remained a close-knit people, very religious, peace loving, hardworking, and excelling in trade and having separate identity as a community within the sub sects of Islamic minorities.

Language- The community is endowed with a rich legacy of Arabic literature and the main spoken language is Gujarati, with a mix of Arabic, Persian, Urdu. Hence fundamentally a Gujarati dialect with inclusions of other language.

Cuisine- The whole family eats from a single plate known as the *Thal* symbolic gesture of togetherness and good communication. Community eating in groups of 8-9 persons seated at a common *Thal*. During a meal covering heads is practiced. At community they have deserts or *meethas* first and starters or *khaaras* next followed by main meal *dana* (grain) committee to eliminate food wastage.

Dress (Attire) - Even their daily attire is simply made of cotton, which again is one of the adaptation techniques against the harsh climate of Gujarat, with elegant embroidery work done on their edges. Men- three-piece outfit: *Kurta* and an equally lengthy overcoat dress called '*Saya*' pant called as '*izaar*'. White and golden cap or '*Kuffi*' it is a part of the Bohra men costume and growing a full beard is practiced and adhere by them.

Women- Two-piece dress called '*Rida*' or '*Burqa*' it is distinguished due to its all colours and black colour. It is decorated with patterns and lace which sets it apart from the traditional Burqa. It has a flap called '*Pardi*' (Deshpande, 2017) Unlike other Muslim women who wore Black *Burqa* the Bohra Women wore brightly coloured embroidered *Ridas*. (Murray, 2017)

Their identity is unique blend of different influences suited to the climatic context of Gujarat.

The Settlement Pattern: Bohrawad/Vohrawad

There is strong sense of order and organisation in the planning. They have a legacy of great unique mansions and town built by them. They invested lot of their time in developing the town and residences. They not only brought the Architectural style but also technique of building and materials from the parts of the world they travelled in. The Traditional habitat and domestic place, *Bhorawad* is an introvert neighbourhood built around a street and its branches which is now an elapsed legacy. The ancestral Mansion in the *Bohrawad* is grouped around a street and these forms a *Mohalla*. Each *mohalla* unit has fifty to hundred houses. Several *Mohallas* form a *Bohrawad*. The town developed organically as the *Bohrawads* expanded. The houses are laid out introvertly in a grid in row house pattern on standard size plots. The buildings are hence viewed as a set of a group on the street one after the other with similar features, scale and tone of colors used, creating oneness and homogeneity as shown in **figure 1**. The grouping of houses is by Kinship, class and ethnic origins. *Bohras* prefer to have their houses facing towards Mecca direction. (Deshpande, 2017) In each *Bohrawad*, rows of narrow, deep houses - three to four storeys, are laid along the main street, intersected by cross-lanes at regular intervals. The streets are laid as the market street as the primary road, the residential streets as the secondary road and the lanes connecting the residential street as the tertiary road. The reason behind closely knit houses arises from the need for defense from external forces during the medieval period. Also, being a minority community, their need of social, physical and psychological security was also greater. Even though it was a street with many houses, the street had gates which had people restricted entry even at night to the *mohalla*. (Swayam Vernacular Architecture) Extreme cleanliness is maintained along had architectural and structural unity, depicting relative orderliness and homogeneity. It has a close and dense urban character. There is a reflection of sense of place even today in the houses even though not in use due to its character and uniqueness which make it's a timeless masterpiece to be preserved. (Swayam Vernacular Architecture). The figure-ground maps developed by students helped to understand the density of the settlement and the uniformity in the plan. A large *Bohrawad* also had a public religious place or Mosque for religious gatherings and rituals.



Figure 1: A typical street in the town
(Source: courtesy of Ms. Shreya Deshpande)

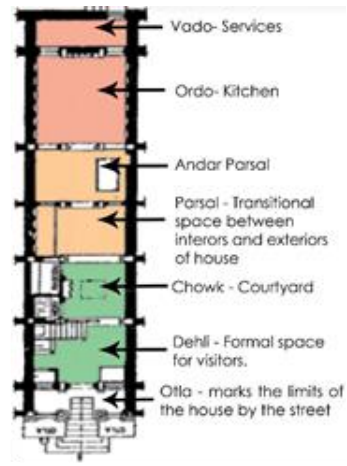


Figure 2: House Parts
(Source: courtesy of Ms. Mitushi Sawarkar)

4. Observations and Analysis of the Bohrawad Settlement

Architectural layout and interiors of a typical house

A typical residence has following parts as shown in **figure 2**- *Ordo*- (often called the hall). It is the most important space on the entry space on the ground floor, private and formal in nature. It has a raised entrance platform. It is used for entertaining and welcoming family, friends and relatives. *Parsali* – (alternately called *Ordo*) this is an ante space to the main room used for relaxing by women in the afternoons. It can also optionally serve as sleeping space. *Avas*-it is the main family space and the focus of the house, well- lit and ventilated by a skylight at the top. It usually includes the kitchen, store and the water place i.e., *Paniara* too. *Paniara*-water place is most decorated and celebrated alcove of the house celebrating water as life especially in a hot dry climate, *Parsal*- It is an extension of the *Avas* and a semi enclosed space used for extended family gathering, dining. *Otla*- An open or semi-open space that serves as a connection between the dwelling and the street, which is more visual and symbolic rather functional in nature. *Deli*- it is the transitional space or arrival area at the entrance that acts as a screen between the private and public zones. It has WC, the stairs and a window seat (Deshpande, 2017).

The house has a small courtyard covered with mesh on top which acted as an important climate mediator and social gathering space. The court allowed warm air to escape and also ensured privacy inside. The window had seats like bay windows for viewing outside on the street. The students studied the following space making elements and space making crafts at Siddhpur façade elements, finishes, calligraphy, iconography, relief work, cladding which was unique and an amalgamation of various styles (Saraswat, DICR). These crafts



Figure 3: Streetscape of Siddhpur (Source: Students Settlement study Report on Siddhpur, 2019)

assimilate social structure its patterns and trends, geography and economy of space reflect upon each other and play crucial role as aspects prompting the interpretation of the need. Geometric patterns were used in the interior decoration. The abandonment of the houses hasn't affected their vintage beauty. House with 365 windows is the biggest house in the town. It stands like the brightest white pearl of the town. Though residence being abandoned/ locked down/ vacant/ dilapidated, still the architecture speaks through the photographs.

Streetscape Character

The architecture of Siddhpur is basically an amalgamation of Hindu craftsmanship with Islamic forms in Indo-Saracenic Architecture as shown in **figure 3**. The *Bohra* residence in Siddhpur recreates a space ambience exquisitely amalgamating the Hindu-Islamic-Colonial style reflecting in their Gujarati habits and origins. The *Bohras* culture can be expressed as people with Islamic faith and values and European trade ties. Architecture in *Bohravad* evolved due to the presence of British in India and Classical and other European styles as a symbol of high standard and status process of adaptation, adoption and retention in their architectural forms.

Architecture has gone through influences as they are trader community. The Architectural style on the façade of mansions they built was influenced by Classical, Portuguese and other European styles brought back from places they visited abroad for trade.

The students studied the house, street and interface between the two as shown in **figures 5, 6**. On the commercial street the students studied the mixed used character of architecture. Most of the buildings in the residential street were constructed in the early 20th century. On the other hand, the commercial street had comparatively a greater number of buildings which were constructed from the beginning of 21st century to the present time. The residential street has row houses which shares common wall with the adjacent houses, only 26% of the houses from the street were occupied while the others are non-occupied, dilapidated or demolished for newer construction. The clock tower built by one of the businessmen presides over the local market place. As shown in **figure 4** the clock tower dominates the *bazaar* of Siddhpur in terms of everything. The crown at the top signifies loyalty to the king or emperor.

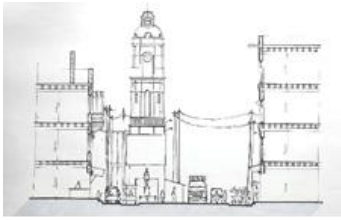


Figure 4: Street section -Clock tower



Figure 5: Street section

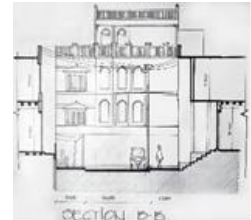


Figure 6: Street section high plinths

(Source: Students Settlement study Report on Siddhpur, 2019)

The market street has commercial, residential as well as mixed use buildings, the percentage of the mixed use being the highest. The streets are very narrow with parking issues. The majority of the buildings on the market street are partially or totally occupied. The buildings on the residential street maintains the height of Ground + one or Ground + two, while Ground+ three and Ground+ four storey buildings dominate the commercial street. The road width of the residential street is about 5m, enabling mutual shading of streets between but the row houses and the market street have an average road width of 9m. The road gets narrower as one approaches the clock tower creating a focal point. Lots of vistas are created as one walks down the mix of organic and grid iron streets.

Even though the interior layout was introvert and courtile, the exteriors were open for the people to appreciate the beauty which was quite opposite to their Islamic philosophy. It had only two faces the front and back which became the face of the house and two common walls shared with the adjacent houses. The *Bohras* were open to new ideas which are reflected in their richly decorated facades of houses. Today the houses of *Bohras* have combination of Islamic, Hindu and Colonial Architecture due to presence of British in India. The elevation of the house showcases an amalgamation of the Gujarati, Rajasthani, Mughal, Greek and Gothic Architectural style owing to the various ethnicities of the past rulers of Siddhpur.

Classical and other European styles as used a symbol of high standard and status. The tripartite facades with occasional gable roofs inserted the series of flat roofs. There are intricate designs of plinths, doors, copings, columns, ceilings, beams, balconies, arches, *jaalis* (trellis), *mihrab*, minarets, staircase, ornamentation, *jharokha*, and brackets. Features inspired from Gujarati and Rajasthani style are *Jharokhas*, floral and animal motifs, use of wood for facades. The wooden intricate *jaalis* not were a decorative feature but also aided to cool the harsh climate by allowing wind inside. Features inspired from Greek and Gothic style are gable roofs, Corinthian columns, and tripartite facades. Mughal inspired features are *jaalis*, intricate railings, introvert planning. Male dominates in their community and is seen even in the architecture. There was nice shadow pattern created due to the decorative features and *jaalis* as the sun light fell on the attractive intricate facades. It gave a textural quality to the wall along with the materials used. The wooden windows allowed the women views of the outside street by not allowing views of the inside. Hence the *jharokhas*, bay windows or projected balconies served this purpose well. Process of adaptation, adoption and retention is seen in the architectural forms of the residences.

(Deshpande, 2017) Façades have structural unity and are finished in diverse range of pastel shades with elaborate relief work. The market street follows the similar architectural style however; the facades are hexa-partite and intricately carved.

5. Development of Studio Project

Design Insert of Backpacker's Hostel in Siddhpur

It was observed in the studied streets that there are houses which were either abandoned, locked down, vacant and dilapidated. The exquisitely beautiful mansions of Siddhpur, once the symbol of prosperity of the *Bohras* are abandoned by the families as they migrated to the cities. They moved out post-Independence in search of better opportunities, and the houses remain empty for most part of the year. Very few people visit the houses. Some are dilapidated, accidentally burnt down, demolished for new constructions. There are new cement concrete buildings which were being constructed with no design features similar to the existing houses. The town has a rich heritage and has potential to be put to an adaptive reuse and revive it. The town is close to Ahmedabad and Patan which are the most popular most visited tourists' destinations thus a Backpackers-tourist hostel facility for tourists was proposed at Siddhpur to revive and activate the deserted *Bohravads* of Siddhpur. Adopting the building in the historic surround, but addressing the need of the day. Suggestions to be deliberated upon buildings built today with analogies of the historic ones that have been studied. With the intention of preservation, the design is proposed in the same context. The Backpackers hostel is a chain of hostels across India for backpackers and tourist. The Hostel will bridge the gap between generations and introduce the youth to the beautiful blend of Architecture in the town.

It aims at introducing to the future generations to the rich history and culture of the *Bohras* and offers a glimpse into their lifestyle, architecture, and crafts through the facade and space planning. The Backpackers hostel aims to bring back the glory of the once prosperous trading town of Siddhpur by attracting tourists and youngsters and provide a comfortable stay for them to explore the town. The building is proposed as an insert between two row houses, in place of a demolished row house as shown in **figure 7**. It was designed by the students in a cramped site of 336 sqm having existing two side walls and a plinth in between a traditional street in Siddhpur having *Bohra* influence on the facades. The site has two 5m wide access roads on both the sides of the site and existing plinth level of 1200 mm and a well on eastern side. The design program focused on provision of adequate light ventilation in the cramped site along with keeping in with the context of existing façade of the adjacent buildings. The site had roads on the shorter side.



Figure 7: Site for Backpackers hostel design (Source: courtesy of Ms. Isha Rane)

6. Observations From Design Studio Outcome

Following are observations after analysing the students design outputs. Plans and elevations were compared and there were certain patterns observed. Few differences and similarities in approaches were also observed. Salient features of each according to the following categories are mentioned below.

- **Site**– There was site limitations having a linear plot with blank walls on two longer sides interpolated among rich heritage buildings. Though the limitations were fixed the student approaches were diverse
- **Plan**–Layout within a shell is linear owing to the site restrictions with the use of courtyards or light ducts to receive light and ventilation. The planning was based on a typical *Bohra* house with public areas (reception, waiting and dining) at the front and private rooms at the back. Most of them were symmetrical with central strong visual axis. In the plan the two patterns observed with respect to placement of light court and movement corridor. All the public spaces such as waiting area, office are placed at the entrance of the building to avoid the disturbance to the other zones of the building followed by the semipublic spaces. The guest rooms by most of the students were designed at the back side with overlooking green spaces or gardens within the site margin. The services like the toilets and washing area for kitchens etc. were taken care by providing service ducts. Courtyards are proposed for congregation and relaxation by the residents. Courtyards in the building brought in ample amount of light and serve different functions that bring people together and reflect the traditions of Siddhpur as shown in **figures 8, 9, 10, 11**.

In first case figure 9 students had courts in the center and movement corridors adjacent to the court and vice versa in the second figure 10. Most of the students opted for a regular doglegged staircase closer to the entrance whereas one student designed a straight flight spine running along the length of the building as shown in figure no 9. For utilization of the terrace space as green and open space many opted for flat terrace as being in the hot and dry region.



Figure 8: Hostel designed by Ms. Isha Rane



Figure 9: Plan of hostel by Ms. Vaishnavi Chandane



Figure 10: Plan of hostel by Ms. Aditi Gunjal



Figure 11: Plan of hostel by Ms. Akshata Parbate

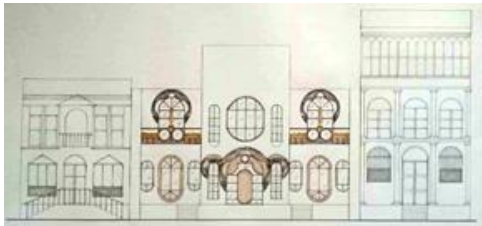


Figure 12: Elevation of hostel by Ms. Aditi Gunjal



Figure 13: Elevation of hostel by Ms. Akshata Parbate



Figure 14: Elevation of hostel by Ms. Vishakha Gaikwad

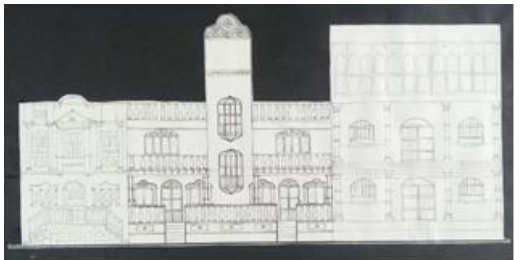


Figure 15: Elevation by Ms. Vaishnavi Chandane

- **Elevation-**

As the longer walls are blank, only two elevations were available to design. Two patterns in terms of elevation treatment observed were continuing the tradition or the neo vernacular style. In terms of elevation or facade design some students had continued the traditional architectural styles of adjacent buildings and some had a contrast approach. The facade is designed to bridge the gap between two houses, replicating them. However, to show the detailing and design of the columns which form an important part of the facade, the walls are eliminated and pushed back to focus on the columns in one of the designs. The pitched roofs maintain the skyline of the row houses and pastel colors along with wooden columns help the building camouflage with the surroundings keeping the unique selling point of Siddhpur- its uninterrupted rows of colourful houses intact. There were balconies projected on the upper second floor attached to the guest rooms overlooking the street on the front side. The balconies have treatment given similar to the adjacent buildings as shown in **figure 13**.

The symmetry in the façade was retained by having openings, doors and windows placed accordingly as shown in figures below. Most opted entrance was from the center of the plot with two windows flanked on each side. The openings on the ground floor were repeated on the first floor too. The plinth was raised matching with adjacent buildings. Also, the floor level and terrace level, number of floors was matched. Since access to the terrace was given was only the staircase block was projected beyond the floor plane and acted as a central design element. The shading devices to the doors and windows were semicircular arches, segmental arches or triangular design. Few design principles reflected are repetition, rhythm, unity, tactile texture and patterns, harmony, symmetry along the central axis, ornamentation, rhythm.

- **Architectural elements**-Architectural style intricate designs of plinth, doors, coping, columns, ceilings, beams, balconies, arches, *jaails* (trellis), *mihrab*, minarets, staircase, ornamentation, *jharokha*, arches, brackets and railing. The interiors have traditional furniture inspired from the Bohra houses which portrays tourists, the culture of Siddhpur.
- **Volumes**-The volumes modulated inside the building create interesting spaces, due to the limitations of area of the floor plate. Vertical massing, was done by stacking spaces one on above other continuing the grid of structure below. One of the students replicated the Clock tower in the market and took it as an element while designing the staircase block.
- **Indoor environmental quality and light and ventilation** - Being located in the harsh hot and dry climate the building was lit naturally and passive cooling techniques for ventilation were devised. Light and ventilation ducts were carved out inside within the greens or water body in courts controlling the indoor microclimate. The ducts not only took care of the services but also acted as light and ventilation ducts. Use of *jaali*

walls were seen with water features like cascades, still ponds resembling a *Paniara* in a Bohra house helping in increasing air flow through the spaces by Venturi effect. Thus, students took clues from the traditional house features and redesigned them in a modern way to suit the Hot and dry climate.

- **Building materials / construction technology-** Continuation of wooden carvings and railings, window *jaalis* was observed in the space making of the interiors of Backpackers hostel. In the façade, beige color or light colours were used similar to the surrounding mansions with intricate carvings on the columns and façade with Taylor tile sloping roof which is a local material and a balcony with wooden carved balustrades and made-up columns.
- **Landscape-** There was very little scope for landscape design as there were no side margins. Thus, the students utilised the back-side margin flanking the road side to introduce shrubs. They took care of the evaporative cooling in the dry climate of Siddhpur. But since the plan was supposed to be made compact the internal courts and ducts became the breathers of the building. One of the students had an open single flight staircase designed besides the court to appreciate the beauty of the green space created along with ventilation. Students opted for wall cascades, fountains and still waterbody to cool the building and enhance the look of the interior. These water bodies were placed such as they fall in a linear grid with a central alignment with the entrance creating a visual axis. There were few service courts too and courts which invited the guest to be a part of the landscape. So, these were not only visual courts but had interactive spaces for the guests to enjoy. Thus, a balance of the open and built was achieved.

Few students staggered the courtyards or internal open green spaces in the structural grid into smaller courts. The courts became visual relief for the dining areas and the waiting areas near the entrance. The entrance at the road side was raised to match with the adjacent buildings flanked with series of steps creating a grand entrance. There was open air dining area seating provided within landscape in stone. Inbuilt seats of made-up stone were organised in groups along with shrub beds. Trees and shrubs which are native with less water requirement were proposed in the courts and shorter edges along the road. The road side plantation provided a tinge of green within the manicured manmade built mass surrounding it. So, the deserted look of the street was enhanced with greens along the road.

7. Conclusion

Two schools of thoughts were observed regarding plan, a central, movement spine and peripheral movement spine and all the usable spaces were adjoining these spines. A third approach to address the movement pattern in the plan was not explored. Variations other than doglegged staircase or spine staircase were not explored by the students. The biggest challenge was addressing the existing street elevation and using indirect light and

ventilation. The restrictions on taking light and ventilation from the top and only two sides challenged the students to think innovatively. The cramped site and strong existing context of the *Bohrwads* pushed the students to explore more. The design insert addressed existing elevation and blended harmoniously in the existing street. Connecting two existing building with a non-built or green patch was not observed. Visual connections were not explored; instead physical connections of elevations were made. The area under discussion was limited to a residential street.

The regional precedents offered invaluable insights about culture, technology aesthetics and philosophy that prevailed during the building of those structures. The studio also exemplified the study of history and historicism when applied in a design studio, providing to be effective as one of the channels of creativity. This settlement study sensitized the students towards the existing culture and architectural richness bygone of town Siddhpur which is now untouched and forgotten and also bridging the gap between history and space design. Inclusion research into design studio opened up the perspective of Designing in mind the past but designing for the future, as reusing the existing spaces which has an adaptive reuse. The type of study of incorporating research by case study as a part of reaching towards a sensitive design was proved useful. The contribution of the paper gives a guideline in the manner in which research study and its application in a historical context can be conducted in the Studio. ■

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