

Pedagogical Approaches For Responding To The Context (Vernacular Design Studio For Bachelor Of Architecture)

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Abstract- The context and Architecture go hand in hand when we look at the traditional/vernacular built form. Architectural language for a particular region is the result of conscious efforts taken by the users to answer their exact needs. As the development takes place, the gap between contextual language and the newly built form increases. This is also the reflection of a shallow understanding of the relationship between context and the built form. Academically making architectural students sensitize towards this issue can be one way in which this gap can be addressed. The study aims to address this particular gap through an academic discussion along with aspiring architects who have to struggle hard to understand the idea of responding to the context. The study showcases three different approaches adopted in a second-year bachelor of architecture design studio in three consecutive years. As every year, the site for the studio was selected in a different context, challenges faced by faculties as well as students were different each time. Studios integrated the design briefs for users in rural contexts of different nature. Each time, the studio was inventive to address the context, exploring local building materials through hands-on workshops, etc. The paper intends to look at all three approaches and lay certain observations that can be adopted in other design studios to strengthen the relationship between context and built form.

Keywords – Architectural education, Context, Culture, Development.

I. DEVELOPMENT AND ARCHITECTURE

We live in a world where change is constant and it is the scale to measure one's progress and regress. In this type of setup, being an architect when we look around, the language of architecture that is reflected out of one's lifestyle tends to showcase the development. As this development is always preconceived from rural to urban; scale, material palette, construction technique and so the architectural vocabulary keeps changing with time.



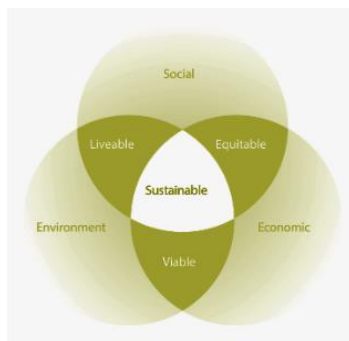
Photographs showing the gap between rural and urban house form

Figure 1. (Source: Author)

In this constantly changing approach of development, the gap between context and built mass is growing continuously, making the built masses more and more monotonous.

II. CONTEXT AND SUSTAINABILITY

If the built forms responding to context are observed thoroughly, they are many times more sustainable. There are factors like site feasibility, planning to meet passive strategies, material feasibility, climatic responses, etc which have to be taken care of when we look at built forms responding to context. As architecture also demands to deal with the larger aspects of life such as social, economic, and environmental concerns along with livable, viable, and equitable aspects, sustainability and architecture are interrelated.



The triple bottom line approach of sustainability

Figure 2. (Source: <https://wiki.usask.ca/display/sandbox/Sustainable+Agriculture+2>)

Due to the development, certain terms like urban, semi-urban, rural started coming into the picture. Approaches for sustainability have been consciously taken while developing the urban area, but they are very different from those observed in rural areas.

2.1 SUSTAINABILITY IN URBAN CONTEXT –

Sustainability in the urban context is now not solely considered an environmental concern but also incorporates economic and social dimensions. A growing awareness of the environmental, social, and economic problems associated with architecture and industry has led many business leaders and communities to adopt practices deemed to be more sustainable over the long term. The scales to measure sustainability are also at times real-time measurements in urban areas and they are lost during a longer period.

In many cases, the decision taken for a building is very limited and not adaptive enough for the overall picture of the development.

2.2 SUSTAINABILITY IN RURAL CONTEXT –

Livelihood perspectives have been central to thinking and practice in rural development.

In a rural context, the approach for any built mass (as a house form or space for community) is always seen as participative. It gives the essence of human existence due to its temporal nature.

The built forms in rural areas are the outcome of various factors like climate, locally available materials and techniques, the lifestyle of people, cultural background. The decisions related to space planning, selection of materials, construction technology, etc. are taken sensitively which minimizes environmental impact.

III. ARCHITECTURAL EDUCATION AND RELATED CHALLENGES

Manier times, students come from diverse social backgrounds and varying access to the possibilities of different kinds of practices. But the social and cultural baggage students carry is often either neglected or broken down too harshly, completely dismissing the history of who students are or where they come from. (Sharad & Gopwani, 2019, pp. 102-108).

The pressure to think differently or at times called out of the box makes them fairly lost in the project, and the complexities they face in the methods of learning are the most crucial and challenging aspects for the faculty to deal with.

Also, students tend to get either inclined towards technical aspects or theoretical aspects and the collaborative approach is lost in most cases.

On a similar note, Ar. Shirish Beri asked this question to students and faculty of architecture in his letter, "How can we prepare the students to deal with this paradox on how to become modern and return to the sources at the same time?"

IV. MUMBAI UNIVERSITY AND ARCHITECTURAL EDUCATION

The Mumbai university current syllabus is divided into two parts.

1. Basic course (semester 1 to 6)

2. Advanced course (semester 7 to 10)

The basic Course intends to develop representation skills, analytical skills as well as covers the primary set of knowledge about design process and construction.

In the advanced course, students are trained to establish a connection with the industry. Certain advanced technical topics are introduced to students.

V. VERNACULAR DESIGN STUDIO

2.3 5.1 INTRODUCTION –

In Mumbai University, the syllabus for semester IV Architectural Design studio suggests developing built and unbuilt masses for clusters and communities. Also, its objective is to design spaces suitable for lifestyle in rural or semi-urban areas. Designing for communities remains the main goal for this particular architectural design studio. Understanding climate becomes a very crucial part of the entire process. Knowledge of local materials and their use in today's context, fulfilling the current needs, becomes equally important while addressing the context.

At AIKTC school of architecture, New Panvel, in three consecutive academic years, the vernacular studio was conducted in different physical settings with different sets of challenges to address. The approach to conduct the studio was different every time.

Each approach is discussed below on common parameters like physical setting, documentation process, program development, design process, and outcome.

2.4 5.2 APPROACH 1 (ACADEMIC YEAR 2018-19) –

The studio started with the introduction of the term Vernacular Architecture to students. The student studied examples of vernacular/traditional built form in the initial part of the studio at different climatic

zones in India. Students referred to the data available in books as well as the internet to generate the report and a 1:10 scale building model using the actual materials. The objective of this exercise was to make students understand the appropriateness of vernacular built form to its context based on various parameters like climate, available material, the lifestyle of the people, etc.

2.5 5.2.1 PHYSICAL SETTING AND CONTEXT –

The area of study was in the Konkan region of Maharashtra near Chiplun, a village called Bhuwadwadi. It was a small settlement of nearly 100 household units spread along the slope of the hill. The village sustains on the available natural resources around. The major population of the village is involved in farming activities throughout the year. The majority of the younger generation migrates to urban areas for better opportunities.



Figure 3. (Source: Author)

5.2.2 DOCUMENTATION PROCESS –

Students studied the settlement based on certain physical and nonphysical parameters like topography, the lifestyle of people, building typology, material palette, construction technology, vegetation, agricultural pattern, natural water system, and basic amenities. Students mapped the settlement concerning its public, semi-public, semi-private, and private spaces. A detailed study of house form in a group of three was carried out to understand space planning, the hierarchy of spaces, use of construction materials, and response to climate. Entire documentation was translated in the form of drawings, models, and analysis sheets once students returned to school.



Figure 4. (Source: Semester 4 batch, the academic year 2018-19, AIKTC, SoA, New Panvel.)

5.2.3 PROGRAMME DEVELOPMENT –

The next stage was to involve students in formulating a design brief and start the design process. Students were not provided with a design brief by mentors but individual students were asked to identify an issue related to the village based on a study conducted by them. The architectural brief of an individual student was the response to resolve the particular issue. Students developed their area statements based on existing case studies. The selected site for the architectural intervention was located at the central part of the village and had an existing usage pattern observed at various times of the year.

The design briefs were more community-driven and serving to the people of the village. Many programs were related to channelizing the resources available around.

5.2.4 DESIGN PROCESS –

In the next part of the studio, students were introduced to an exercise related to the book "Form Space and Order" where students were asked to read certain pages and note down their understanding. Now at this stage before starting the design, each student had a certain understanding about the settlement, traditional response to the climatic conditions, local material available and construction techniques, theoretical knowledge about vernacular/ traditional architecture and design principles from "Form space and Order".

The first stage of the design process was all about locating a proposed built form on site. Certain parameters like existing movement patterns, yearly activities on-site, sun path diagrams, and wind movement patterns were given to the students to analyze and locate their built form on site. Students further tried to develop their projects with the help of individual mentors to respond to the immediate

context in the most appropriate way. The hands-on workshop in adobe and bamboo construction was planned for students at the stage where they had resolved the planning of spaces to some extent and were looking for resolving the building concerning construction details/joineries.



Figure 5. (Source: Author)

5.2.5 OUTCOME –

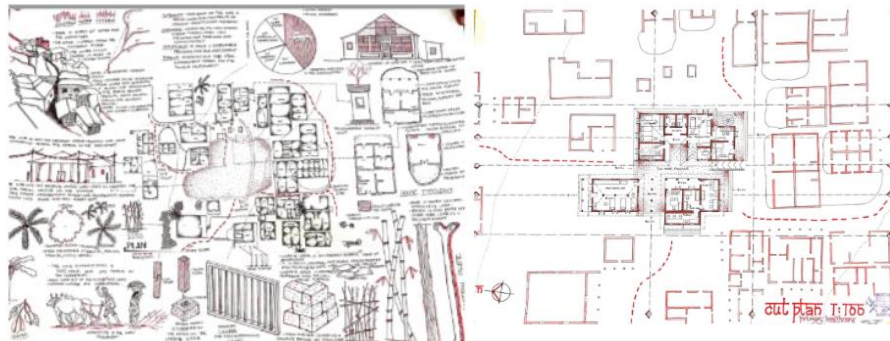


Figure 6. (Source: Akbar Dudhaniwala, Sem IV, the academic year 2018-19, AIKTC, SoA, New Panvel.)

There were different approaches seen as an outcome. In certain cases, students were seen following an existing pattern and built masses trying to merge with the context. In certain cases, the built masses tried to stand out in the existing pattern and showcase the modern approach yet following the language.

5.3 APPROACH 2 (ACADEMIC YEAR 2019-20) –

The studio was initiated on similar lines where an introduction to vernacular/traditional architecture was given through lectures. Extensive reading sessions were conducted where the book 'House, Form and Culture' by Ammos Rapoport was introduced to students.

5.3.1 PHYSICAL SETTING AND CONTEXT –

For this studio, the area of study was located in the periphery of Panvel which is a semi-urban area under CIDCO. The village was observed to be under pressure of development happening around. Students were given to study two neighboring villages named Kon and Kolkhe.



Figure 7. (Source: Author)

5.3.2 DOCUMENTATION PROCESS –

Students were asked to document and analyze the region as per certain parameters like house forms, construction techniques, people, their lifestyle, and other socio-cultural aspects. Based on collected data and site documentation, students generated certain drawings about, Building typology, building heights, amenities in the village, connectivity pattern, services, etc.



Figure 8. (SOURCE: SEMESTER 4 BATCH, THE ACADEMIC YEAR 2019-20, AIKTC, SOA, NEW PANVEL.)

5.3.3 PROGRAMME DEVELOPMENT –

A similar process was followed as in approach 1, where students understood the issues in the village and addressed them through architectural intervention.

The proposed design briefs were more administrative connecting the community to the authority. Some design proposals were extensions to the existing built masses and functions.

5.3.4 DESIGN PROCESS –

In the initial part of the studio, students visited Hunarshala, Kutch for having hands-on experience of certain natural building materials. Students also studied some of the buildings there to understand how traditional/vernacular building materials should be used in today's context. Students made 1:10 scale models of different conditions of wall sections observed in the building. As the specific site location offers challenges to tackle the conflict between old and new, this particular exercise enabled students to derive appropriate solutions.

5.3.5 OUTCOME –

There were three major approaches seen. Few students proposed the buildings with the use of conventional building materials, few students took ahead the traditional building materials combining with modern techniques, while others tried using recycled building materials and alternative building techniques.

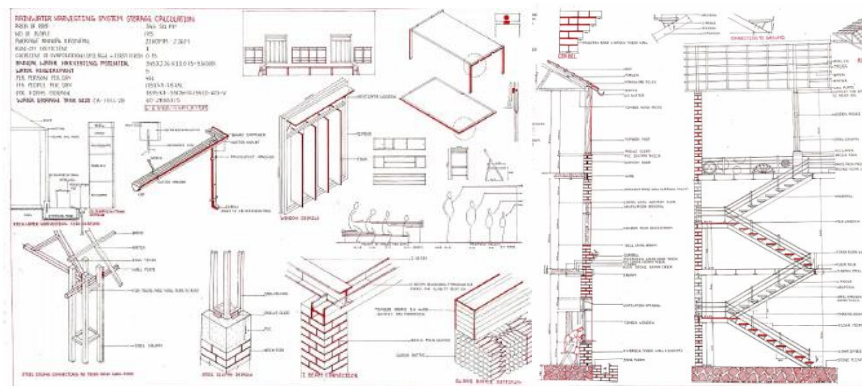


Figure 9. (Source: Komal Pawaskar, Sem IV, the academic year 2019-20, AIKTC, SoA, New Panvel.)

5.4 APPROACH 3 (ACADEMIC YEAR 2020-21) –

5.4.1 PHYSICAL SETTING AND CONTEXT –

The site is located in the tribal region of Maharashtra, a village called Vetipada, in Dahanu. The people of the village were observed to be living in sync with the ecology around them. Since the community is non-gated, the area located for architectural intervention for the community is also not defined in terms of the boundary.



Figure 10. (Source: Author)

5.4.2 DOCUMENTATION PROCESS –

Extensive documentation was carried out in the settlement where students mapped the whole settlement and tried to understand the correlation between nature, community, and livelihood.

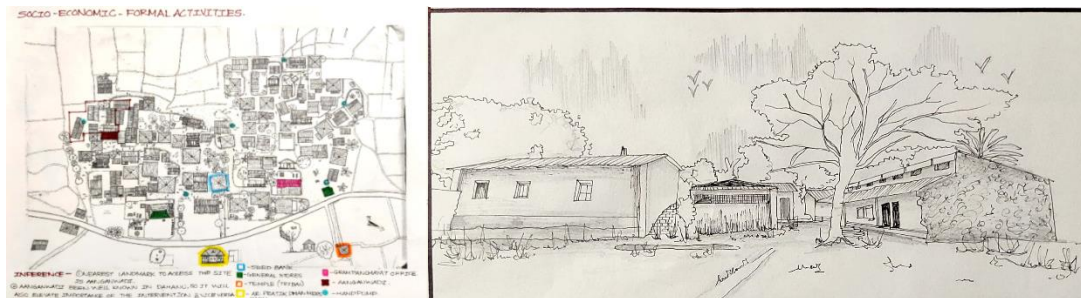


Figure 11. (Source: Semester 4 batch, the academic year 2020-21, AIKTC, SoA, New Panvel.)

5.4.3 PROGRAMME DEVELOPMENT –

After understanding the overall setup (built and unbuilt), students tried to respond to the needs of the community through certain systems and built masses. The program developed concerning conserving and reconnecting with the existing biodiversity of the region yet connecting to the outer world.

5.4.4 DESIGN PROCESS –

The design studio for this particular semester was divided into different stages.

In the first part, reading was introduced from the book 'House form and culture' by Ammos Ramport, and certain sessions were conducted to understand the importance of culture in shaping the build masses. In the second part, students tried to understand the role of the 5 elements, i.e sun, wind, water, earth, and sky, and also they tried to understand how different building elements respond to these natural elements. In the last part, after understanding the overall setup (built and unbuilt), students tried to respond to the needs of the community through certain systems and built masses.

5.4.5 OUTCOME –

The approaches seen in this studio were very sensitive towards built as well as unbuilt environments.

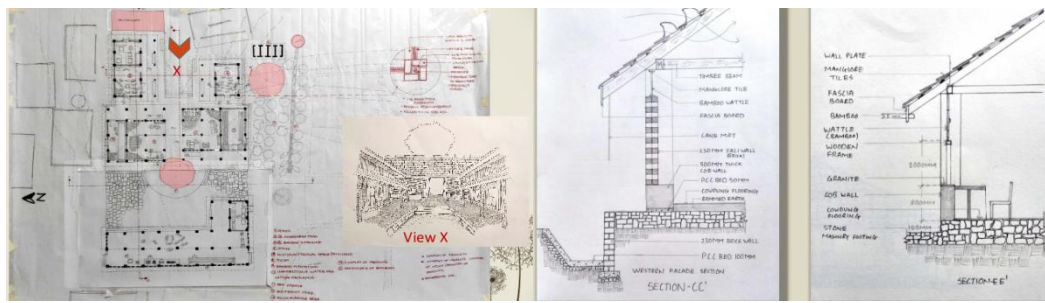


Figure 12. (Source: Amman Karbhari, Sem IV, the academic year 2019-20, AIKTC, SoA, New Panvel.)

VI. OBSERVATIONS

6.1 DICTATE VS DISCUSS –

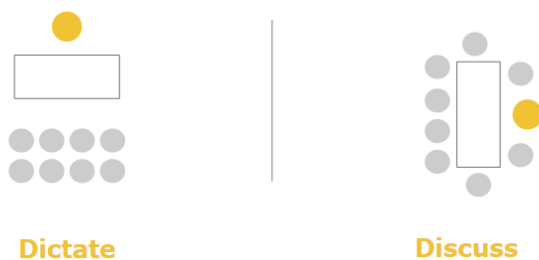


Figure 13. (Source: Author)

In all three approaches, students were part of decision-making at every stage of the studio right from selection of site, formation of the brief to the hands-on workshop. It was observed that students take ownership of their projects and decisions if they are involved in decision-making.

6.2 CHANNELISING THE INTEREST –



Figure 14. (Source: Author)

All three approaches culminated in various activities like reading, writing, documentation, drawings, making models, and hands-on workshops. This multidisciplinary approach made sure that students perform well in at least any one of the activities mentioned above. This also motivates students to perform well in the final output.

6.3 SIMILAR LANGUAGE BUT DIFFERENT APPROACHES –

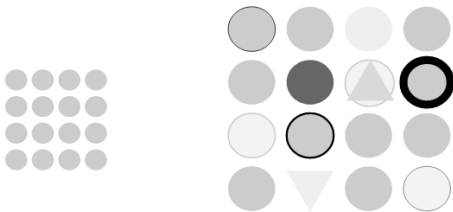


Figure 15. (Source: Author)

Though it was observed that most of the proposals follow similar language in terms of responding to context, different approaches were adopted by students in terms of planning, form, use of materials, and detailing.

6.4 CONFIDENCE IN DETAILING –

A hands-on workshop was an important part of the vernacular design studio in all three years. Different materials and techniques were explored by students in hands-on sessions. Hands-on workshops gave students confidence in the detailing of the project.



Figure 16. (Source: Author)

VII. CONCLUSION

The studio programs in all three years were divided into different parts in such a way that students get to understand the appropriateness of design decisions taken in the evolution of vernacular /traditional built form. At the end of each studio, it was observed that, though students had the freedom to choose their approach to design; most of the design responses were found to be inspired by the immediate context and hence followed similar language.

This particular studio can be used as a tool to sensitize students for responding to context. This sensitivity of connecting the built masses to the existing context can be taken ahead in further design studios where students are already sensitive enough to understand the relation.

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