



Design Process and Space Creation: Design Studio

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ABSTRACT

Lot of subjectivity is involved in architecture pedagogy. Till school students are trained to think objectively. Many times, students struggle in working with abstract ideas in first year. In this paper an attempt has been discussed which was used to teach students of first year spatial fundamentals of design with exploration of planes. Temporal dimension of design was introduced along with anthropometry study.

Key words-subjectivity, design, space, plane, scale

Pedagogy as per oxford dictionary is” *the method and practice of teaching, especially as an academic subject or theoretical concept*”. Every teacher and academic institute based on their ideology adopt a method for teaching a subject. Pedagogy in creative fields is different from theoretical fields as there cannot be infinite solution for one problem in creative field.

Architecture as per Merriam Webster dictionary is “*the art or science of building*”. Art is related to creativity and science is related to logic. Creativity and logic are controlled by different parts of brain. Right hemisphere of brain is related to creativity and left hemisphere is responsible for logic. Architecture education is unique as it is blend of creativity and logic. Learning architecture is perceived as a cumulative process with an amalgamation of structure of development where it is used as a base for increasing the knowledge and skills

Though many learned people often say “*Architecture cannot be taught*”. In architecture definite knowledge of design cannot be provided which makes teaching architecture a tedious process. Many famous buildings around the world are designed by architects who don't have formal degree. But in every institute educators try best of their capacity to impart knowledge of architecture in students. Based on difference philosophy of institute's, design process changes. In this paper design process adopted to teach first year at University School of Planning and Architecture, GGSIPU, Delhi is discussed.

Till school students are trained to think objectively. Situation of first year students is expressed by Ar. HariMohan Pillai on his website “*You are just out of school, out of the uniform and crossing the threshold into the first year of a professional course in architecture. Beyond the threshold, in a school of architecture, there is no class room, but a studio, where you are not*



taught, but expected to learn. In this studio you don't look at and listen to the teacher giving lecture, but stare out of the open window and listen to the whispering Nature.

Here you don't write notes that you preserve and learn by-heart for the examination, but draw lines, make shapes, splash color, feel textures, cut boards, fold papers and wonder how to put into words the concepts that cross your mind while doing all this, to impress upon the jury in the court of sessionals at the end of the semester...Here there are no text books to refer, but case studies to be done of works of others who haunted these studios before you for five years, grew wings of imagination and flew away into the world of architectural profession.

Yes, today architectural profession is a world wide web, and each architect is at the center of own web, weaving fantasies of space and making them work.””

Intent of first year design studio

In first year of Architecture student learn the basics of design. They are introduced to

1. Point, line, plane, form
2. Modification in form: Form addition and subtraction
3. Texture, light, color
4. Anthropometry, scale

In design studios generally we introduce above mentioned basics of design one by one through different exercises. After understanding they do a small design based on design curriculum. Author tried to inculcate knowledge of the same using hands-on exercises and emphasis given on observation and experience while designing.

Design exercise: to create space for day to day activity based on anthropometry at elementary levels using few architectural elements with landscape. Students were taught to represent ideas through sketches drawings, and three-dimensional models. A definite programme of design was not provided to students as in most of the cases students get stuck with idea of design based on their preconceived notion.

Stage -1 :Choose a Tree: Tree is living entity which is growing, evolving and thriving. It encompasses space below, within and above. Understanding that space and the correlation of observer and tree was aspect of this stage one. Students advised to choose a tree within the university campus. They observed these trees daily but don't register it This exercise familiarized them to different types of trees. Giving this freedom to choose the tree i.e. site for design, forces students to observe tree as an object.

Tree was used as an anchor around which space is created. Students analyzed tree on the basis of its external and morphological qualities. Different features of tree like leaves, bark, flowers on and their texture it, tree's shadow on the ground, etc. was observed.



Image:

1,2,3: different types of trees opted and studied by students

Aim of this stage is to familiarize students to concepts of light and shadow, texture with experiential quality and knowledge of landscape.

Stage -2: Document tree: students were informed to choose an appropriate area around the respective tree as per its foliage (example- 10x10m, 15x15m, etc). In class students built a model of tree on a scale 1:25 and prepared sketches and drawings of tree.

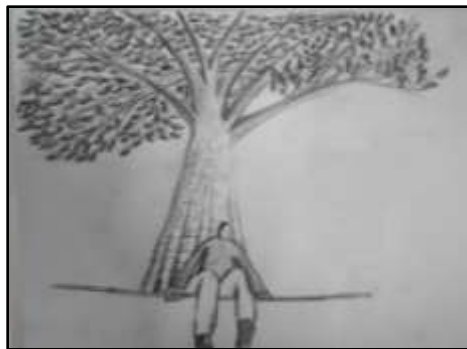


Image 4,5: sketch prepared to document tree.

Aim of this stage is to introduce concept of scale and learn graphic representation

Stage -3 : Adding planes to create space: in general while designing a space, students are asked to submit a concept, bubble diagram, single line plan etc as stages. In first year as novice, students struggle to understand this process as they find it difficult to imagine how a line in plan will translate in three-dimensional object. So, the process intends to create space using planes and then make plan and others drawing of the space.

For this stage students were asked to design a space using planes where a person can play hide and seek with each other as well as with the tree. This gives students scope to experiment with planes. Students tried different permutation and combination by changing height, orientation and opening in the planes. Different simple and complex spaces designed by students were then analyzed.

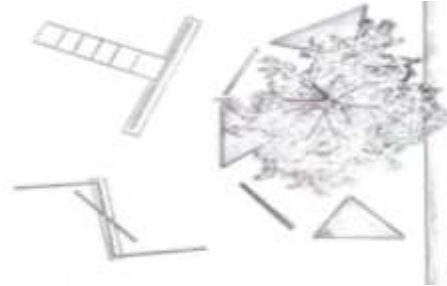


Image 6,7: model and line drawing prepared of spaces using plane

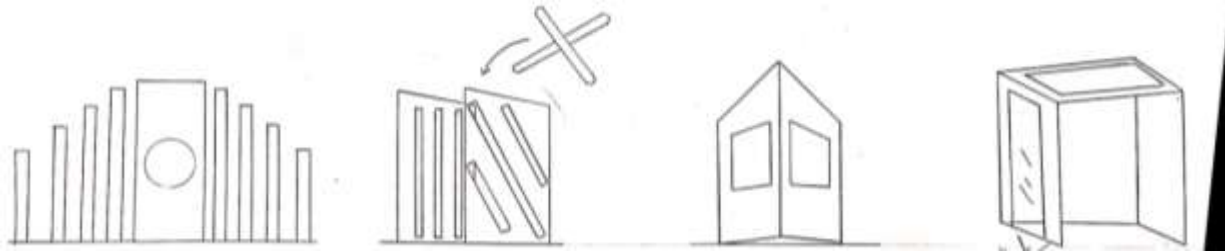


Image8: experiment with planes

Aim of this stage is to introduce concept of basic aspects of building form and space like wall, opening space creation.

Stage -4: Introduction to anthropometry: instead of following standards of anthropometry from books, students measured their own body.

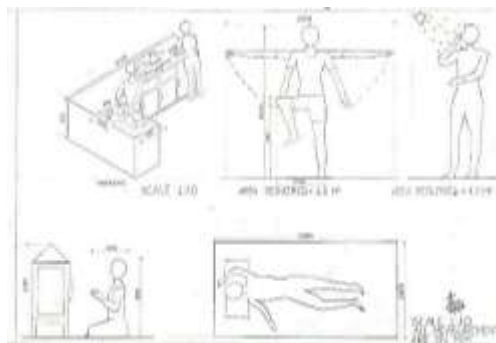


Image 9,10, 11: anthropometry study in class

Area requirement for different day to day activities were calculated by students.

Stage -5 : activity allocation in space created:in the final stage students allocated different activities like sleeping,studying,etcaccording to anthropometry and created a living space in space created earlier.

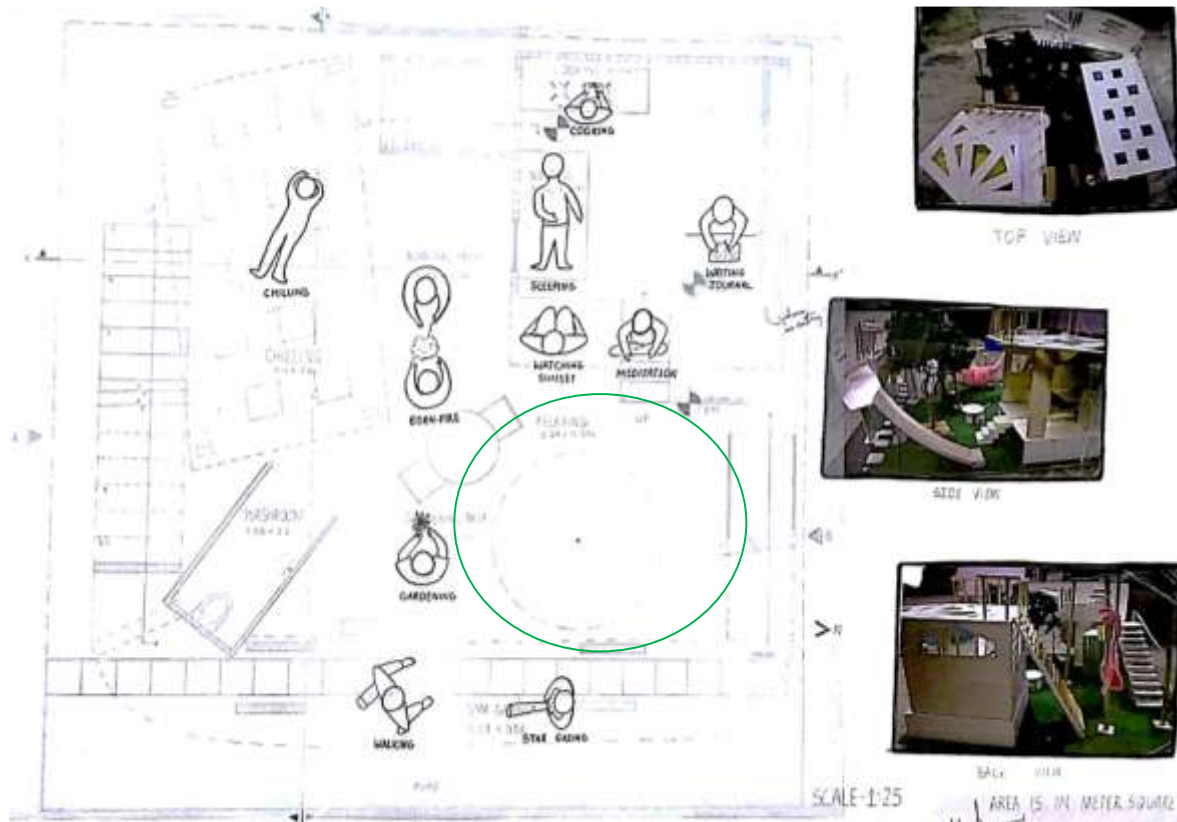


Image 12: Activity allocation in space

Based on activity horizontal planes were added. Enclosure for different activities were created. Heights of some elements were increased/ decreased, openings were added, some elements were added/ Subtracted etc. according to the activities based on anthropometry.

Sketch, plans, elevations and sections of the model with appropriate anthropometry details was prepared by students. Concept of human scale was explained in class



Image 13,14,15: different areas explained by section, model and elevation with human figure

Process of design was kept flexible so that form keeps on evolving and changing based on activities for which space is designed. Some of the design examples of models prepared by students are shown below



Image 16,17: example of design solution



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Reference:

1. Shorter Oxford English Dictionary (1993), Oxford, ISBN 0 19 860575 7