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Appropriate Teaching and Learning Strategies for the Architecture Students

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Abstract: An architect is responsible for shaping not only a building but also the entire society. In order to achieve a smart society, we need to educate future architectural students regarding implementation of theory into practical life. This paper throws light on the process of bridging the gap between the theory and its implementation in real life. The methods that promotes the interest and architectural knowledge in students in order to encourage the ability to develop personal projects as a novel design.
"There are two educations. One should teach how to live and other should teach us how to make a living."   –John Adams
Keywords: Architecture pedagogy, Smart society, Building Construction.

I.   INTRODUCTION

According to survey of CoA there are more than 400 architectural school throughout India. Educators, Teachers, Lecturers of such institutes are capable enough to imparting theoretical knowledge to their apprentice but due to lack of practical experience they are unable to impart sufficient technical practical knowledge.

There are various teaching strategies are used in architecture education such as:

A.   Lecture Methods

In Lecture, Mentor Demonstrates the architectural topics verbally. In this methodology student's role is to listen and got down the information deliver by the tutor. One of the main short coming of this methodology is to grab the student's attention throughout the lecture as they find lectures boring and uninteractive. No lab apprentice or architectural tools are involved in it. Vast past of syllabus can be covered in shorter tome. Listening ability of students is enhanced. Assist in learning different languages.

B.   Demerits of this Methodology

As the understanding level of students are different. So it becomes difficult for teacher to identify who and how much had grasp the lecture. Interactive studies are more student friendly as compared to the class lecture.

C.   Demonstration Method

Whatever students have learned skills, showing them how to put that skill in working condition. For Example: If a student had worked on project of hospital. In order to bring that hypothetical project in to reality student need to refer local Bye-Laws in order to meet the least requirements of light and ventilation and other essentials aspects in a project. So, in architectural school Educators can aid students to turn their hypothetical project into reality by absorbing them with practical knowledge.
Working in consultancy will make student practically strong and help them with the same.

D.   Case Study

Case study is the deep study of any person, case, community, organization, etc. It is a part of architecture course curriculum, which assist students to develop the tentative idea of the project and understands the fundamental requirements which are to be provided in any project.
Architecture curriculum involves at least 2 case studies basically students are assist to collect data from two different scale of projects. For Example: if a student is designing a Hospital, he will go for small hospital as well as for large scale hospital to understand the comparative differences between them and become able to frame his own requirements according to his project demands.

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E. Demerits Of Case Studies

Although case studies help students with the practical knowledge but it's not necessary that all gathered information is applicable or useful for his project.

It's hard to sketch defined motive from case study.

Sometime all information required cannot be obtain from case study. So, there is also stage of literature study which aid in providing the requirements and functioning of a best and renowned project across the globe.

During case study students are asked to visit every space, every room, service space of place. They are asked to sketch or photograph each and every space but sometimes it become bothersome.

F. Site Visits

Site visit is also a predesign stage in which student select a plot assigned by government for particular project or hypothetical plot. Following information are gathered with respect to site.

Site dimension, orientation, topography, location, site feasibility, service availability, site vicinity, micro and macro climate of site, etc.

This stage helps students to draw inference regarding limitations and opportunities of site that can be taken advantages.

G. Workshops

Through workshop we can foster student's creativity. The teacher can develop creative independence of students. Students creative personality could be formed in the process of participation in architectural workshops. Workshops aims to form and develop student's ability to create something new, first to work intelligently and independently with the architectural material and then with scientific information.

H. Conferences

In architecture education the primary aim is to broaden students' perspectives and design skills and this is only possible by providing an independent medium of expression. Therefore, during the student's educational process, in order to obtain the necessary skills and development, it is necessary for the students to be encouraged and to benefit from the informal education such as conferences.

I. Extended Lectures/ Expert Guest Lectures

Guest lectures by eminent speakers is necessary in architecture education because these lectures provide the students with the current trends in the building industry. These lectures motivate the youth for their future career also.

II. SHOWING TEACHING & LEARNING STAGES OF ANY PROJECT IN ARCHITECTURE CURRICULUM

TOPIC
- Intoduction lecture of topic/project...

CASE STUDY 1
- May be small scale project...

CASE STUDY 2
- May be large scale project...

LITERATURE STUDY
- Studying best project...

SITE ANALYSIS
- Gathering information to undersatand the site...

PREPARATION OF BUBBLE DIADRAM
- Showing spaces connectivity...

PREPARATION OF FLOOR PLANS
- Showing details different spaces, size and connectivity...

COMPLETION OF ALL ARCHITECTURAL DRAWINGS
- Plans, sections, elevations, services plas, etc...

MODEL MAKEING
- for better understanding of proportion, space & volume...

In order to enhance the practice of students, architecture institute can parallelly run consultancy. These consultancies will provide opportunity of execution of learned theory in actual project and will aid scholars better understanding of their course.

With the passage of time, the buildings are reported to account for large amount of air pollution, water pollution and soil pollution. Structures are also responsible for natural resources depletion. On the other hand, increasing population required shelter for survival and excessive construction is also creating pressure on the land.

In order to cater the upcoming harms, it is important to introduce new educational techniques that prepare architects for sustainable future. Beside enhancement in work confidence, students will also gain stipend.

III. CURRENT SCENARIO OF ARCHITECTURAL INSTITUTE

During the architectural course scholars learn to design spaces which is based on stability, utility and form achievement.

Designing process encompasses the searching and sorting the functional component for generating a workable and sustainable built environment. For construction, the proper amalgamation of function and form is necessary to bring architectural design into reality.
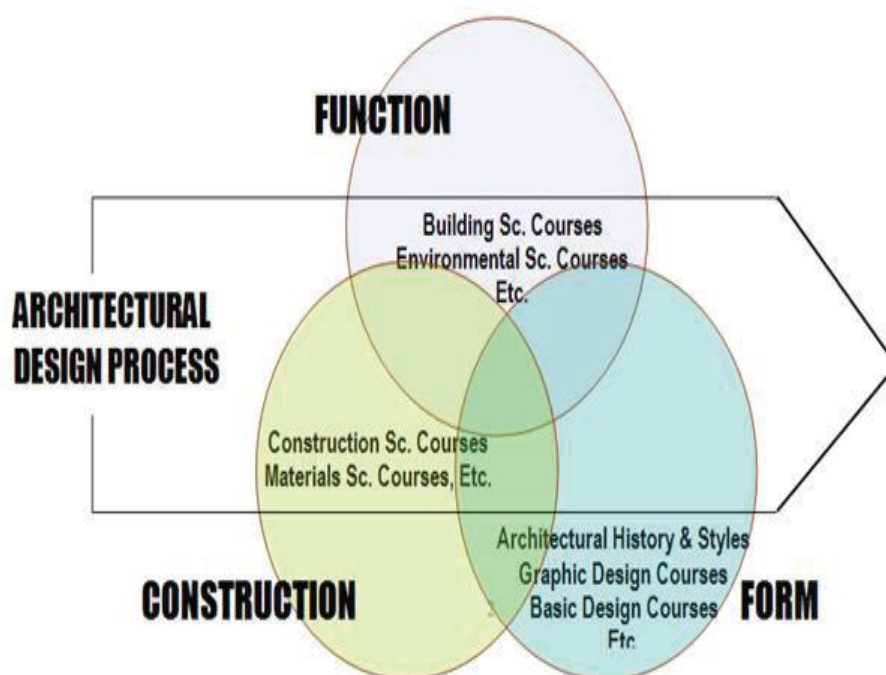

Figure 1. Architectural design as a Synthesis Course through Architectural Education Curriculum based on "Form", "Function" and "Construction" (Adapted from Uzunoglu& Uzunoglu, 2011.)

Architectural design process that are taught is realized in following stages in 5-year duration. Academic 1st year is dedicated for clearing the basic of architecture principles, elements and building materials etc. 2nd and 3rd academic year is meant for introducing students with some design problems and parallel side history and other norms are taught to students. 4th year includes the group problem of urban designing and also training session. 5th year is meant for thesis submission.

IV. OUR PROPOSAL

A consultancy, running along with academic will assist in providing practical knowledge to students of each year.

Fresher learning about the basic elements and principles of design, will got motivation by attending and participating 'office' conducting actual construction project. 2nd year and 3rd year students will be engaged in drafting floor and service plan. Coming to the stage of 4th and 5th year they will learn the working environment of architectural firm and will become efficient in dealing with clients.

So, a graduate student of architecture course leaving the university will become a self-dependent, reliable architect that can confidently take part in the construction work and in shaping the society and world.
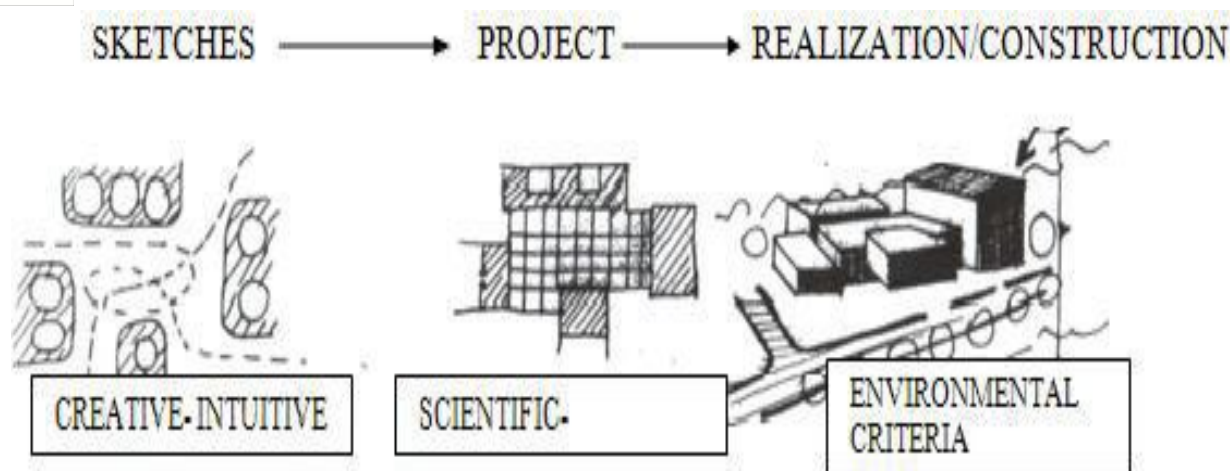
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Figure 2. Architectural design process is realized in three stages practically (Arcan, 2008)

	THEORY	PRACTICAL
1st year	Understanding of basic design elements and principles. Anthropometrics.	Preparing basic model of undergoing projects
2nd & 3rd year	Designing of small projects like residence, hostel, shopping arcade etc. Understanding & learning of electrical & plumbing drawings.	Participating in preparation of ongoing small projects.
4th year	Understanding of existing urban level problem & finding its solution.	Participating in heritage conservation & ongoing large scale project.
5th year	Thesis includes explaining and justifying one's concept & design, preparing all drawings needed for construction of a single project.	Scholars can participate in meeting with client and can conduct almost every chores in architectural firm.

Architecture student's implementation of theory at different academic year

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