

## A Critical View on Pedagogical Dimension of Architectural Education in India

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### Abstract

The built environment is becoming more complex in terms of its quality and structure. In such circumstances architectural education pedagogical strategies has to be modified to address social, political, economical and environmental issues and challenges. Innovative interdisciplinary strategies in architecture education have to be organized in a way which leads to better architecture and urban environments. Pure theoretical approaches are to be related to practice which can be done with pedagogy comprising real-life examples in respect to new models and collaboration between architecture education and non-academic partners. This paper discusses the status of current architectural education in India. It examines the student's perception regarding teaching and learning in schools of architecture from the state of Maharashtra. It is aimed to highlight the need for paradigm shift in pedagogy in schools imparting architectural education in India to enhance learning in architecture education.

**Keywords:** Pedagogy, learning, perception, lecture, visual.

### I. Introduction

The evolution of architecture as a profession is a relatively new phenomenon demanding a different educational approach and pedagogy. The problem is compounded by the fact that while the professional attitude is western import, the pedagogy requires the issues of a distinct cultural identity and the resolution of tension between tradition and modern aspirations be integrally woven into the educational philosophy. Current architectural education is struggling to keep up the pace with rapid growth of urban world. The curriculum has become obsolete because of no change in past two decades as well as Architectural pedagogy has become stale (Colomina, 2012, Till, 2012). As per The general criteria for Royal Institute of British Architects (RIBA) students are to be informed about the profession of architecture and the role of the architect in society. They are to be trained to address of current architectural issues and handle complex design projects (RIBA, 2011). The existing models of teaching are not found adequate to address future challenges.

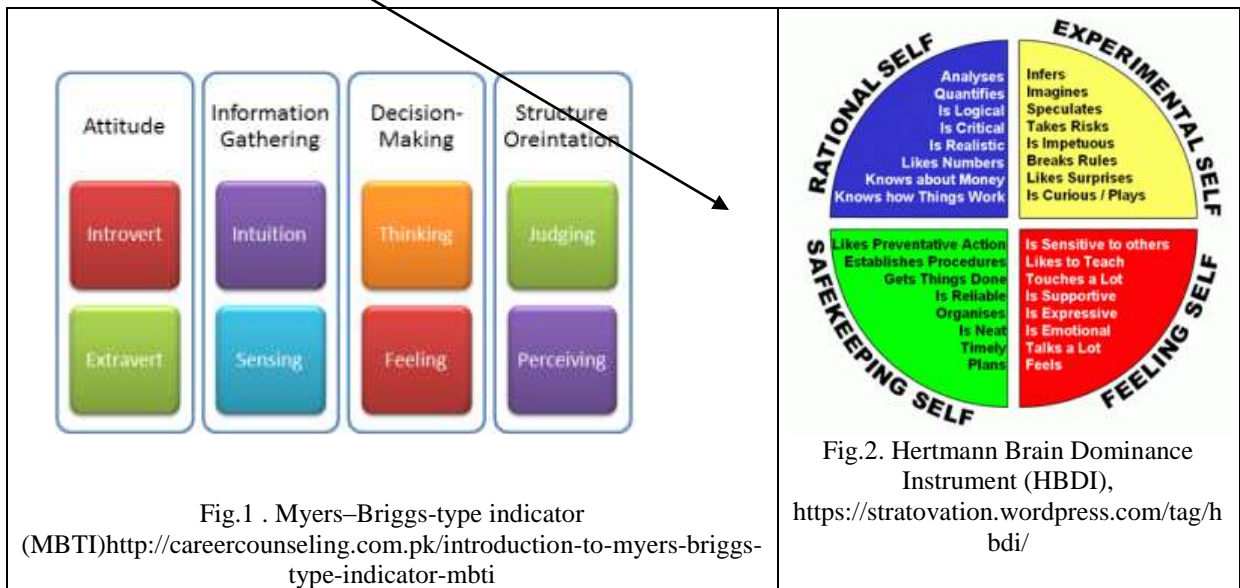
Today architecture requires an understanding and conceptualizing of ongoing interdisciplinary challenges which is basically considered as, the creative process. It has become imperative to look at the interdisciplinary possibilities for architecture education including approaches from outside mainstream architecture education and by broadening the understanding of interdisciplinary. Because of the rigid their institutional structures most universities are not able to react in their curriculum or with their teaching methods to acute architectural, social and

environmental demands. As a result of this most of the universities across the world are searching for number of alternative education platforms. Such platforms take up a position, which includes the non-traditional, the non-conventional, or the non-standardized in contrast to traditional architecture schools. There is an urgent need introducing, comparing, and discussing the meaning of alternative architecture education platforms between the political, the economic, and the cultural spheres of society for today and tomorrow. It is matter of research to explore the role of alternative architecture education platforms in relation to the traditional academic world. Universities need to identify the role of alternative architecture education platforms in the student's curriculum.

#### 1. Learning process

Learning is defined as an internal process that is different for every individual as each possesses different way of acquiring new information which is referred as learning style. Learning style is considered as a biological and developmental set of personal characteristics that is defined by the way individual's process information (Fox and Bartholomae 1999). Every individual consistently follow a unique pattern of perception, organization and retention of new information. Most frequently used learning style models are the Myers-Briggs-type indicator (MBTI), Hertmann Brain Dominance Instrument (HBDI), Felder-Silverman Learning Style Model and Kolb's Learning Style Inventory (LSI) (Fig.1,2)

Draw diagram in diff colour



## II. Type of Learners

**Accommodating learners** grasp their environments concretely through their feelings and utilize action to transform information obtained. They are risk-takers and enjoy seeking out new experiences. They generally tend to solve problems in an intuitive, trial-and-error manner and instead of their own analytic ability; they rely on others for information

**Diverging learners** are interested in people and tend to be imaginative and emotional. They have the ability to synthesize and/or assimilate a wide-range of totally different observations into a comprehensive explanation that enables them to generate many ideas. They are less concerned with theories and generalizations. Their approach to situations is in a less thoughtful, systematic or scientific way, therefore their abilities to make decisions is inhibited.

**Assimilating learners** experience their world symbolically and transform it to information through thought. They are less interested in people and more concerned with abstract concepts, but are less concerned with the practical use of theories.

**Converging learners** are more concerned with the relative truth than absolute truth. The knowledge of converging learners is organized, so that through hypothetical-deductive reasoning, they can focus their knowledge on specific problem.

Draw diagram in diff colour



### III. Pedagogy

The dictionary meaning of pedagogy is “the science of teaching” (Oxford Advanced Learner’s Dictionary of Current English). In other words pedagogy as a science is seen to be about the techniques and decisions of what to teach and how to teach. Dutton (1996) criticizing the definition that sees pedagogy as mere teaching technique claims that this definition robs the term of its more provocative and potentially liberating forms of human exchange. Instead he suggests a more inclusive definition, which equates pedagogy with the social production of meaning generally. He uses Sholle’s definition of pedagogy as: “All those practices that define what is important to know, how it is to be known, and how this production of knowledge helps to construct social identities.” (Dutton 1996).

#### 4.1 The Purpose of education

Dewey (1988) declares the general purpose of education in a society as: “The continuity of any experience through renewing of the social group is a literal fact. Education, in its broadest sense, is the means of social continuity of life (166). Thus, education’s purpose goes much beyond the mere transformation of knowledge; it aims at implementing changes in the patterns of behavior of a social group in the desired direction. The historical purpose of education is defined as:

- Preparation for achievement
- Formation of the practical, intellectual person
- Civilizing and socializing
- Personal self-cultivation
- Bringing individuals into harmony with nature
- Shaping the human personality in accordance with its predetermined ends
- Preparation for research.

### IV. Pedagogy types

In past decade the number of architectural colleges is increasing as a result large numbers of students being packed in a lecture hall and the lecture continues to be the teaching strategy for delivering the basic curriculum. This format do not suit the architectural discipline which needs more personal attention which is not possible given the constraints on teachers, facilities and students. Research establishes that students learn more with small number of students (Simmons 1959). A lecture is defined as one person speaking, to a group of people on a particular subject or theme, more or less continuously. The main thrust is on delivering the content as per the time slot allotted in a designed space or lecture hall. Here teacher is the central focus of information transfer which he performs

with some tools like chalk board or use an overhead projector to provide visuals for students. Students are expected to take notes while listening to the lecture and generally not encouraged to discuss hence very little exchange occurs between the instructor and the students during a lecture. This method is referred as the didactic method which is defined as education through the transmission of information based on theory of learning which assumes that students are passive recipients of knowledge transmitted by the lecturer (Ramsden 2003). Knowledge considered as an object that can be transferred from the teacher to the learner. It is largely used by most of the institutes given its strength that it is possible to educate large number of people at once, thereby lowering costs. The main limitation is that it yields less deep knowledge compared to other teaching methods such as case-based learning (Grunwald & Hartman 2010) which is very important in architectural discipline.

In architectural education the traditional lecture approach to teaching with lectures which is passive in nature is ineffective compared to active learning methods (Marbach-Ad, Seal, & Sokolove, 2001; Jungst, Licklider, & Wiersema, 2003). Considering the complex nature of architecture it needs a constructive approach which advocate active learning by students for meaningful learning to occur. Ideally, students must actively engage with the content to be learned through such activities as discussion, hands-on activities, and problem solving. Students should be allowed to remain a passive participant and blindly believe and follow information that has been “predigested” by the professor (Hansen & Stephens, 2000). Students must be made accountable regarding what they need to know for their own learning (Machemer & Crawford, 2007). Passive learning made students with low tolerance for challenge” (Hansen & Stephens, 2000) and they get knowledge that is relatively superficial and transient (Phipps, Phipps, Kask, & Higgens, 2001; Moust, Van Berkel, & Schmidt, 2005). In architectural education passive learning do not help students as it largely a one way process where there is not much interaction between the students and the teacher besides it ignores individual differences which is not welcome particularly in architectural design education.

The pedagogical value of various methods of teaching is to be examined specifically whether students gain knowledge, or learn sufficiently from them. To what extent these methods contributes to the learning process of students and under what circumstances a particular method may prove a viable component of the teaching process is a matter of serious concern.

**Students’ perception about the instruction method**

This research is aimed to examine students perceptions of the traditional lecture method as compared to teaching methods that require students to learn actively (Machemer & Crawford, 2007).

**Methodology**

This is exploratory research conducted at various colleges of architecture in Maharashtra. The main instrument used for the study is the questionnaire. To answer the research questions formulated for the study, undergraduate students made up of males and females both were selected.

**Statistical analysis:**

Data obtained was coded and entered into Microsoft Excel spreadsheet. All statistical analyses were carried out using IBM SPSS 21.0 for Windows (SPSS Inc, Chicago, IL, USA). Data collected for the study were nominal or ordinal in nature on five point scale. The nominal data was expressed as percentage. Test of proportion i.e. chi-square test was used to assess bivariate association between categorical variables. The ordinal data were expressed as mean and standard deviation of mean. Differences in mean values were compared using t test or ANOVA. Statistical level of significance was set at 0.05. For the type I probability between 0.05 and 0.1, the significance was considered as marginal.

**Table1: Characteristics of the students**

Characteristics		Number	Percentages
<b>Gender</b>	Male	73	37.8
	Female	120	62.2
<b>Student of</b>	I	4	2.1
	II	11	5.7
	III	112	58.0
	IV	15	7.8
	V	51	26.4
<b>Parents monthly income (Rs.)</b>	10,000-25,000	15	7.8
	26000-35000	19	9.8
	36000-50000	27	14.0
	51000-75000	35	18.1
	76000+	58	30.1
	Not given	39	20.2
<b>Place</b>	At home	100	51.8
	Hostel	35	18.1
	Shared accommodation	53	27.5
	Other	5	2.6
<b>Marks 12<sup>th</sup> std.</b>	50- 60 %	34	17.6
	61- 70 %	66	34.2
	71- 75 %	36	18.7
	76- 85 %	39	20.2
	> 85 %	11	5.7
<b>Reason to join the course</b>	Own interest	178	92.2
	Informed by friends	2	1.0
	No admission in engineering	4	2.1
	Need not to learn math	7	3.6
	Parents wish	2	1.0

**Table 13: Method of teaching**

Subject	Lecture	Chalk and board	PPT	Lecture with chalk and board	Lecture with PPT
<b>AD</b>	91 (47.2)	19 (9.8)	11 (5.7)	48 (24.9)	46 (23.8)
<b>BT</b>	30 (15.5)	45 (23.3)	23 (11.9)	60 (31.1)	66 (34.2)
<b>TOS</b>	29 (15.0)	77 (39.9)	9 (4.7)	82 (42.5)	24 (12.4)
<b>BS</b>	24 (12.4)	18 (9.3)	60 (31.1)	29 (15.0)	77 (39.9)
<b>HAHS</b>	49 (25.4)	8 (4.1)	47 (24.4)	18 (9.3)	83 (43.0)

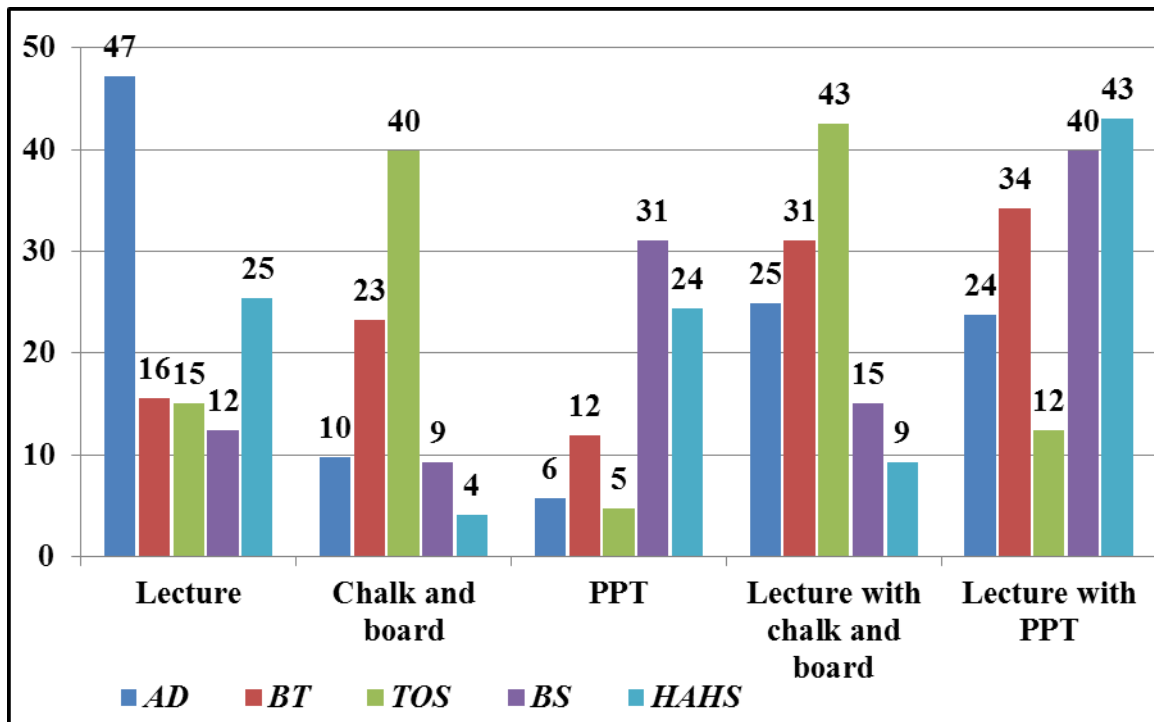
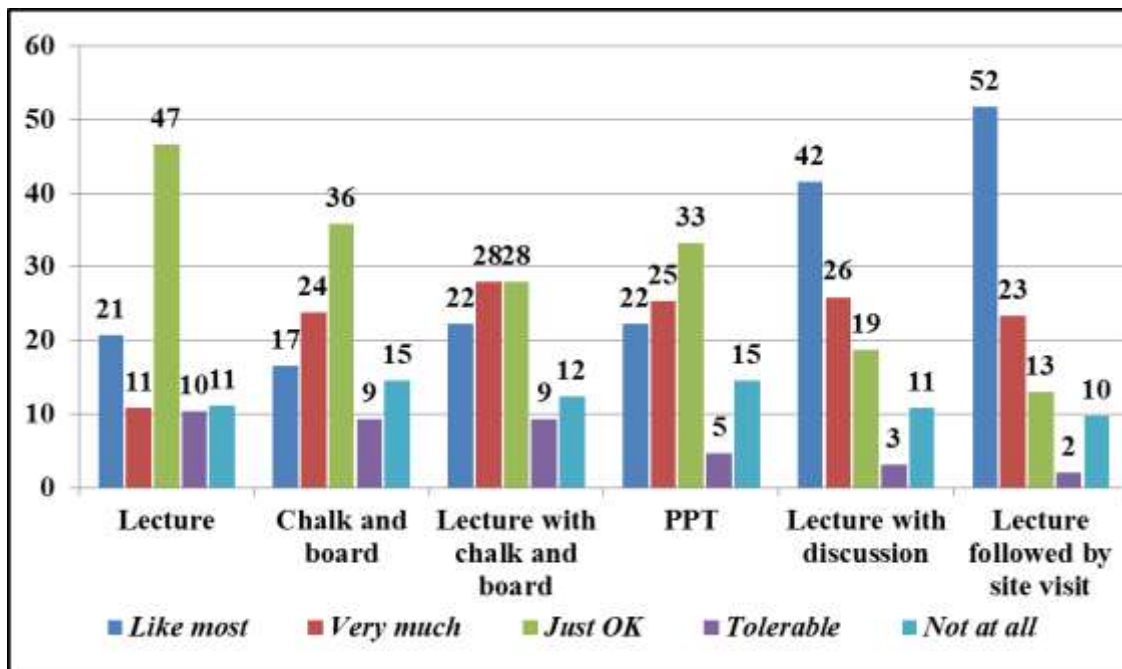


Table 14: Rate method for BMT

	Like most	Very much	Just OK	Tolerable	Not at all
Lecture	40 (20.7)	21 (10.9)	90 (46.6)	20 (10.4)	22 (11.2)
Chalk and board	32 (16.6)	46 (23.8)	69 (35.8)	18 (9.3)	28 (14.5)
Lecture with chalk and board	43 (22.3)	54 (28.0)	54 (28.0)	18 (9.3)	24 (12.4)
PPT	43 (22.3)	49 (25.4)	64 (33.2)	9 (4.7)	28 (14.5)
Lecture with discussion	80 (41.5)	50 (25.9)	36 (18.7)	6 (3.1)	21 (10.8)
Lecture followed by site visit	100 (51.8)	45 (23.3)	25 (13.0)	4 (2.1)	19 (9.8)



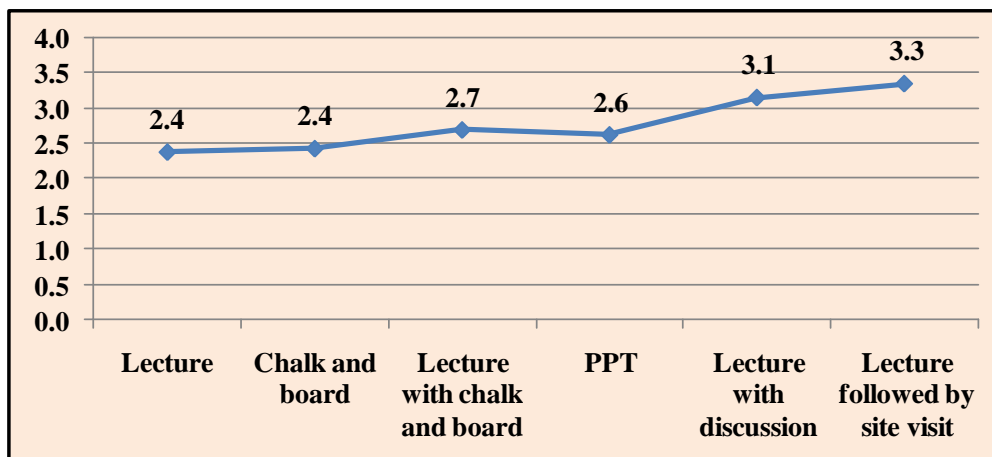
Six different teaching methods for subject BTM were listed and each student was asked to rate the methods for their liking on five point ordinal scale, 0 for 'don't like at all', 1 'tolerable', 2 'just OK', 3 'like very much' and 4 'like most'.

Table : Mean rating for the teaching method for subject BTM

Method	Mean	Std. Deviation
Lecture	2.3764	1.07299
Chalk and board	2.4253	1.06584
Lecture with chalk and board	2.6901	1.00168
PPT	2.6207	1.07242
Lecture with discussion	3.1494	.94384
Lecture followed by site visit	3.3466	.88756

When the six teaching methods were arranged in ascending order of mean rating scores, the following sequence was observed;

- lecture,
- chalk and board,
- lecture with chalk & board,
- PPT,
- lecture with discussion
- lecture followed by site visit.



The highest rating was received by teaching method which involved lecture followed by site visit with the mean standard deviation (SD) score of 3.34 (0.88). This indicated that lecture followed by site visit was the most preferred method. The next preferred method was lecture with discussion with mean rating score of 3.14 (0.94). Other methods such as lecture, chalk and board, lecture with chalk and board and PPT were not liked much by the students as the mean scores for these methods were less than 3.0.

Despite the development of new approaches to teaching and learning in architectural education, lectures remain a prominent feature curriculum. The lecturers are the source of information provided by the teacher which students have to understand and remember. During lecture more than 80% of talk time is taken up by the teacher who controls the classroom. As per research students spend more than 2000 hours of classroom instruction in five years of University education on an average. Considering the benefits of lecture as a prime mode of teaching and students will continue to spend considerable time listening to lectures it is necessary that they must be made interesting.

### V. Conclusion

With the progression of technology there is a need for changing methodology in architectural pedagogy. Architectural education in India must attempt to create an educational model to meet and exceed future architectural education standards. Being a design-based education, the parameters and factors normally adopted in education do not apply with architecture. It can be done with innovating curriculum and pedagogical methods to stimulate interest and captivate prospective students and architects in engage in active practice and thinking. Students need the exposure in which architectural pedagogy has to equipped with various resources like technology, people, ideologies, etc. It must offer different avenues and methodologies that may work in specific settings and contextual

environments. Architectural schools must act as more than an academic institution and work like a professional firm and think tank that engages in real-world applications while embracing technological advances. Architecture pedagogy not only embrace some of its roots but also exhibit a boldness in engaging students in new settings and pedagogical ideologies.

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