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REVOLUTIONIZING THE ARCHITECTURAL PEDAGOGY THROUGH LEARNER CENTRIC TECHNIQUES

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Abstract: Education plays a very important role in shaping the future of the society and the group of people living together form societies which in turn form the nation. Meaning thereby the education and its delivery pattern that is the pedagogy is one of the integral aspects to shape the future and this paper discusses the learner centric pedagogy (LCP) as the pivot of architectural education. The purpose of this study is to relate all the components of LCP to architectural education and propose the ways in which they should be applied to curriculum. The methodology consisted of a qualitative questionnaire with last section as descriptive type to enlist the insight of students on the same. Nearly 65 students were approached where two failed to submit and so the analysis is done on the answers received from 63 students. The result clearly stated that the students require LCP as the fundamental pedagogy tool for all the topics discussed with them within the academic year.

Index Terms: architecture, education, learner centric pedagogy, pedagogy

“Architecture is the learned game, correct and magnificent, of forms assembled in the light.” – Le Corbusier

1. INTRODUCTION

In today's world of continuous amelioration we as humans are surrounded on all sides with buildings and their ancillary supports. But if one sits and ponders that how old is architecture? The answer to it is that it was existent in the Neolithic age and contemporary architectural education in India is about 200 years. Architecture has linkages with the Indus Valley civilization till date to the contemporary world. Not only literature but many live stand-out buildings like cave arts, cave architecture, religious structures, forts, palaces etc. architecture is not individual art it is fusion of so many other arts like engineering, Architecture, interior and art. That's why it is said to be the mother of all arts (Ajit Kumar Gupta, 2020). It was the time of colonization when there was a race of development in almost all the paradigms of life which touched education sector also. Education is nothing but a pathway where the foundations of concrete concepts are built and over the years of revision it hardens and many intellectuals then have the capacity to drive the society with their mindful theories. To cope up with the scenarios architectural education also expanded its horizons.

Architecture if discussed as an educational stream cannot be merely taught by discourses of lectures delivered to the students just listening and the professor just delivering. Architecture can never be taught within four walls as FLW believed that architecture environments created by the architect should be functional and humane and this quality to produce a built form that holds a relation with time and space at the same time is difficult to achieve if the basic concepts of space, time and the space function are not clear.

With the technological advancement the pedagogical pattern also kept on changing rather kept on improvising. Pedagogy is nothing but the way the educational curriculum that is taken up especially for theoretical subjects. In main aim of the paper is to discuss the pedagogy that is most suitable for architectural stream.

2. LITERATURE STUDY

2.1. PEDAGOGY & ITS ELEMENTS

The word pedagogy came from the Greek word paidagogus which merely meant a person who was responsible to drop and bring back the children from school. It was in 1580's when this word derived its meaningful definition and emerged as the science of teaching. As defined by Jean Houssaye the word Pedagogues are the practitioners or instructors or directors of a specific stream of academics.

Whenever a term is spoken of it is taken as the sum of all the major characteristics of that arena and so the main elements of Pedagogy or its main advent are (Shirke, 2021):-

a) **Constructivist**-This form of pedagogy was coined by Swiss Philosopher Piaget in the late 20th century Where the underlying fundamental of teaching was accumulated through experiences or past gathered knowledge. Here Learner happened to be the Genius Loci in developing and gaining knowledge especially through the interaction between him and things, other people and environment and that is why he landed on two main factors of his theory (Piaget's Theory of Constructivism)

i) **Accommodation** – to instill new experiences into the mind with the older ones so as to reexamine the already existing facts.

ii) **Assimilation** – means to absorb the contemporary knowledge data to the already existing database. This actually forces the individual to ponder on the thoughts one already had in mind in comparison to the new ideas that one receives from the current scenarios.

If discussed in the field of Architecture this pedagogy has a very fine role when it comes to detailed study of the forms and practices of the past integrated with technology as advancement s took place and finally to the understanding of the theories and facts prevailing in the contemporary world.

b) **Collaborative** – as the name suggest this points out towards team building and working together and majorly aims at grouping of team members of mixed caliber.



Figure 1 : The elements of Collaborative Learning (Fatima Ibrahim, 2012)

The collaborative pedagogy has a very significant role in Architectural field because here the teamwork and sharing of ideas and finally coming to same platform of solution is a difficult but a very essential part. If the students are in coherence with this process in academics only it will be very easy for them to make a place in the real world as in field with a real project the whole team commences the work for attainment of a common goal to make a well sustained built form.

c) **Integrative** – This method of pedagogy believes in interaction between the academics and the real field. It works in proper sync of field practice and the theory taught in the architecture schools so as to combine both the knowledge of books with skill enhancement also which proves to be a boon in the profession in the later years.

d) **Reflective** – **John Dwey** a practitioner of reflective learning considered reflection a precursor of action meaning there by that the teachers take responsibility of what students understand and learn and even students should take up the responsibility of what they read and study and then use that knowledge into practice. The

reflective teachers take up the onus of time that they keep the students engaged for and also work hard to get the stipulated outcome.

e) **Inquiry Based Learning** – This form of pedagogy instills with the student effort to find the answer to the question given to them. Here the teacher never delivers the lectures as in the case of classroom scenarios but leave the question to be investigated by the student himself and act as a facilitator and helper to guide the direction of the research. The question posed by the teacher should be such that the student is bound to ask more questions so as to get the direction of the research to answer the final question.

In architectural field this works well in the subjects like seminar or construction & material or subjects related to architectural History where the students do the market survey or read the literature to answer the question on the given topic.

2.2. CONTEMPORARY ARCHITECTURAL PEDAGOGY

In earlier time the pedagogy was just the delivering of the lecture, solving the students doubt and then handing over the notes to appear for the examinations. Since the time architecture education started it was more focused on skill development but with changing scenarios these skill oriented track came down to imparting more of theoretical knowledge. (Singhal, 2016)

The most primary style of Pedagogy was:

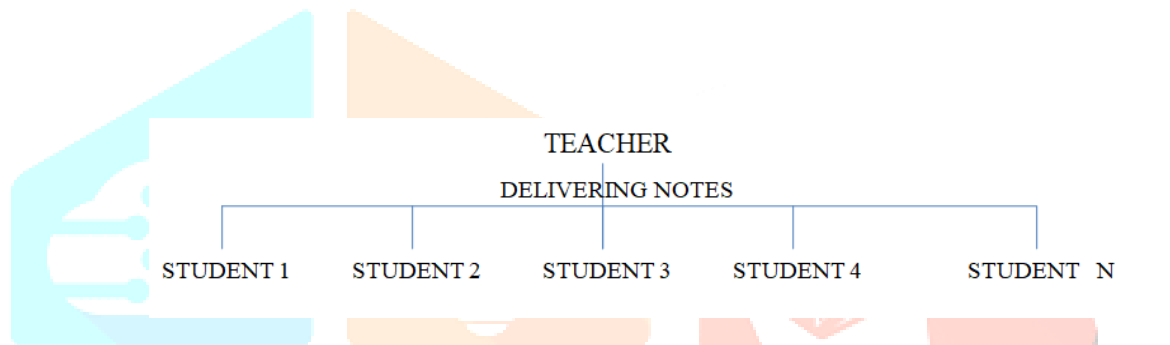


Figure 2 : Early Pedagogy

Architecture education(AE) is credited with the name of Vitruvius when he document the books on architecture “The ten books on Architecture” in the era of Antiquity. The architecture department got its birth in the year 1958. this form of education continued since many years and then Architecture Education got revolutionarized with the birth of Bauhaus by Walter Gropius. Architecture education in India started with Sir J J School in 1896. After this IIT Kharagpur came into existence in collaboration with MIT London (Singhal, 2016). It is strangely ironical that we have 590 architectural schools today but other than SIR J J School none is recognized by RIBA (Ar. Aditi Deep Singh, 2022). Gradually with Council of Architecture, Architect Act 1972 and other revolutionary changes a reputable position of architecture was instilled. But primary way of using chalk and board and delivering the lectures in primitive style continued for many ages.

Table 1 : Popular Pedagogies in different architectural universities

S.No	NAME OF ARCHITECTURAL SCHOOL	PLACE	PEDAGOGY APPROACH
1.	Bauhaus School	Germany	Learning by Doing: emphasis on research & method (Designlab, 2016)
2.	Melbourne School of Design	Melbourne	Thinking and Making
3.	School of Architecture, Carnegie Mellon University	Pittsburgh	Fundamentals, Design Research, Race & inclusion
4.	Massachusetts College of Art and Design	USA	Combination of theory with Hands on practice of design of built form focussed on community living. (Massachusetts College of Art and Design)
5	Sir J J School of Architecture	India	Study of conservation and documentation of country's craft tradition and applying this to design. (Dalvi, 2016)

2.3. REVOLUTIONARY CHANGES IN ARCHITECTURAL PEDAGOGY

Architecture is learned well if it is seen well. Having said so only studio lectures and mere sharing of documents, the academicians giving time only to their full time teaching jobs and no field work led to a lot of loss on the students front. As the time changes with the technological development and innovation in materials the design approach needed to be improvised, the details needed to be refined and the use of software became a necessity.

The pedagogy used in different architectural eras gives a strong foundation to the new reforms. The three elements that act as fundamental parameters to form a pedagogy approach are:

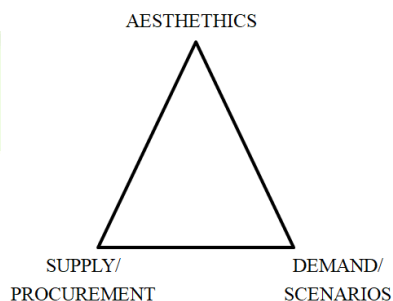


Figure 3 : The three parameters of Pedagogy (Deamer, 2020)

If the technological advancements are kept to be in sight as they play an important role in shaping the architects of tomorrow, the new parameters, according to the researchers, that influence the pedagogy of architectural curriculum has to be :

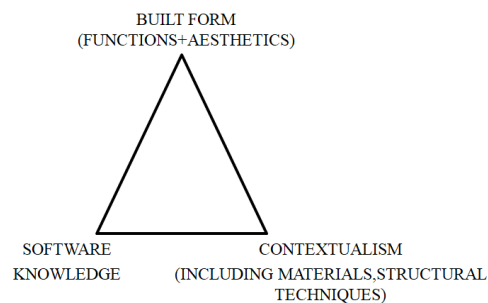


Figure 4 : The three parameters of architectural pedagogy according to the researchers

With the advancement of technology the software related to the field also got matured and more advanced but still they were very few colleges or universities who were really taking pains to get these software to the student database and so the education system was still very primitive with just basic introduction of the software to the students.

But the universities who wanted to really participate in the race of being a recognized once started revolutionizing their education policy and made the curriculum to be more interactive by merging the theory and the practical/studio classes together.

This was the time when the people involved in crafting the curriculum tried to rope in the industry experts and also mentors from different software fields were roped in.

Site visits (like to wood industry, spun pipes, factories) were encouraged. Teams were made and then the topic was discussed in the form of seminars. Academicians started using computers to deliver the lectures.

Team build up also became a part of the curriculum but at this point in time also the professors were just the provider and students were the receiver.

All the above discussion points towards the approach of pedagogy that is having the student at the focal point. The pedagogy so formulated is the "Learner centric pedagogy". It is a teaching method with all the focus from instructor to the student. The most effective aspects of this teaching pedagogy are :-

(Nicholas Bremner, 2022)

1. Students are not mere passive receivers of knowledge whereas actively participate in the whole learning process.
2. As the students are placed at center of attention the knowledge is also focused towards their development.
3. The students take the onus of their work and because the research is done by them they confidently take up the responsibility.
4. The theoretical knowledge is always in coherence with the contemporary skill developments.
5. As the students are involved from the very first aspect they also hold a position to take decisions.
6. The study is not done with the intention of course to be finished but is an ongoing process where self assessment plays an important role.

3. METHODOLOGY

The study has taken references from the already available dataset in the form of journals, book, articles and blogs. The immediate user who are directly influenced by these pedagogies are the- students and so keeping this in consideration the researchers programmed structured questionnaire and got it filled from the students ranging from initial year students to final year thesis students. The students were broken into two groups based on their studio needs:-

- 1) First year – Third year
- 2) Fourth year – Fifth year

The themes were worked out after formation of codes which came into picture after open ended discussion with the students and senior faculty members. The codes were then placed under themes and then respective questions of each theme were crafted.

The questionnaire is programmed on five themes:

- a) Teaching Pattern
- b) Studio environment
- c) Literature study
- d) Site surveys
- e) Student's speculation

Each theme consisted of five questions in first four sections and three descriptive question in last segment on which the students inclination and acceptance was recorded.

The questionnaire was floated amongst 63 students and analyzed according to the Likert scale and short answers. The last section consisted of three descriptive questions to understand the student's perception on the Learner centric pedagogy.

4. RESULT & ANALYSIS

According to the data received the result came out to be:

a) The answer to the question asked about the class interaction during lectures only 25% students find the class interactive. Only 33% students find the lecture of theory and practical subjects helpful in practical subjects. In reference to Design studio due to apprehensions 24.1% students discuss with their mentor twice in whole semester and submit their work.

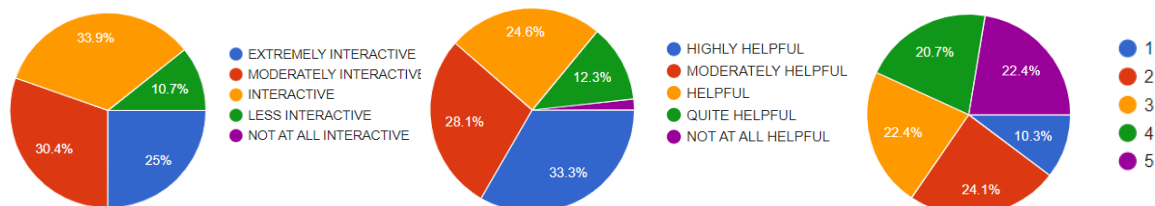


Figure 5 : Percentage analysis of result obtained from questionnaire- Teaching Pattern

b) The students work in teams for which the response was fairly high (77.6%) but at the same time the students were highly anxious (35.5%) for the open juries and critique taken from their fellow batchmates.

58.1% 9 students are not even comfortable in discussion with the mentor in front of batchmates.

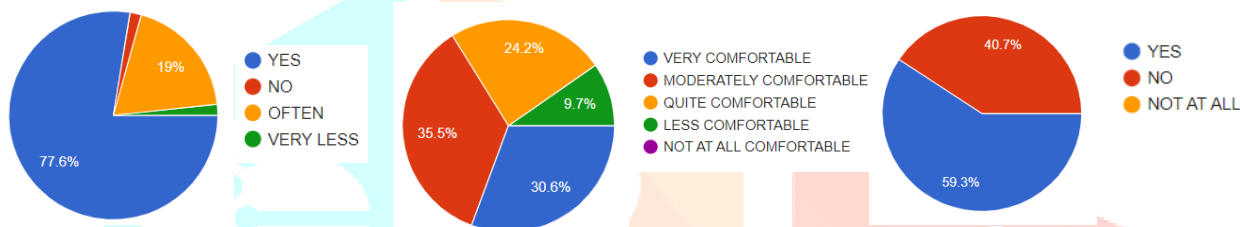


Figure 6 : Percentage analysis of result obtained from questionnaire- Studio Environment

c) In reference to the Literature study part the responses were even not satisfactory:-

33.3% students found the references taken up in the class were helpful to reach out the academic goals. 54% students strive to find out references on the topic discussed in class for in depth study of the same and 88% rate themselves as "GOOD" in gathering information from various datasets available. 39.7% students are just quite satisfied with the documentation process they follow for report writing and 84% are happy that they know majorly the appropriate referencing in their document.

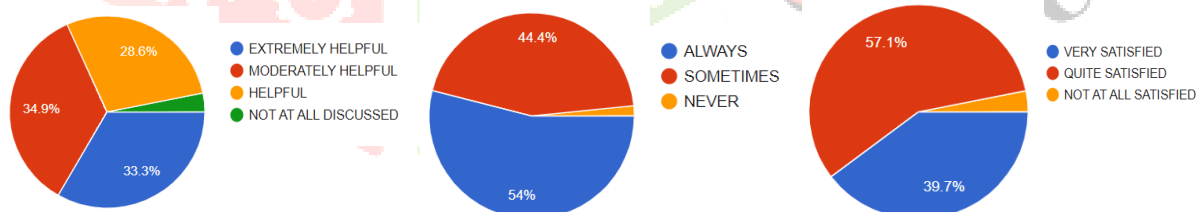


Figure 7: Percentage analysis of result obtained from questionnaire – Literature Study

d) In reference to site visit only 17.5% say visit is arranged frequently by university and 44% try themselves for the same. 49% feel the need of mentor on site which means the topic is not very clear.

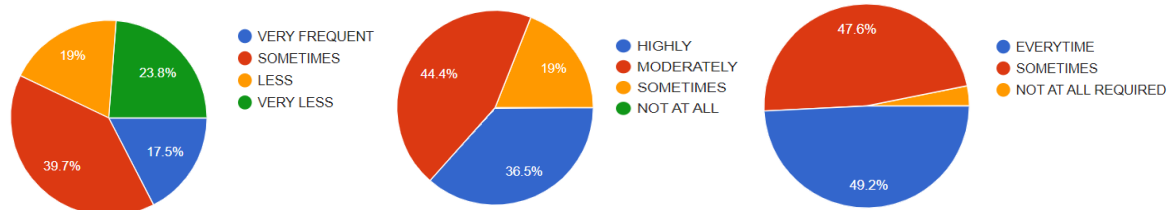


Figure 8 : Percentage analysis of result obtained from questionnaire – Site Survey

e) In the descriptive questions the students gave average remarks (4/10) with respect to means used in lecture delivery. They expect more of field knowledge to be incorporated with theoretical notes. As per the student's speculation classes should be devised to minimize apprehensions, discussions and workshops maximized.

The result brought into light the real apprehension of the students that don't allow them to come out of the shell and even after following the COA guidelines and promoting good amount of electives in the curriculum the expected result is not attained which strongly point out towards the involvement of Learner centric pedagogy in everyday teaching pattern.

5. CONCLUSION

The questionnaire gave the actual insight of the studio scenario and the result demand lot of changes in the pedagogy which keeps the student at the pivot of the arena and as mentioned by a student in descriptive answers that the weakest of all should be promoted and given equal chance to participate and largely contribute to the studio enhancement. Architectural education is a professional course done with an agenda to be placed in respectable offices, industries or to be recognized as an entrepreneur.

Students can take up the role of Architect, Architect Designer, Architect Engineer and Interior Designer (Sikarwar, 2018). For the above responsibilities to be taken and to mark a presence in the real field capacity of forming and working in team, winning over the apprehensions is very necessary and this needs to be done from early years of professional education and so the Learner Centric approach can bring forward a revolutionary changes in the budding architects.

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