International Conference on Research in Education, Teaching and Learning
Paris, France| April 19-21, 2019

Architectural Pedagogy: An Observation on Mid Stage Architectural Design Studio and Presentation Development

Neelima Gubba[1], Monika Yadav[2], Esther Kiruba Jebakumar Clifford[3]

[1,2,3]Associate Professor, JBR Architecture College, Hyderabad India

Abstract

Research in Design Teaching Methodology has been a lesser documented subject. Creative teaching is essential in designing and empowering young architects. Architectural education has to impart alternative thinking and new methods of learning. In this paper, we will be documenting an Experimental Teaching Method in second-year Architectural students who are already exposed to the codes and basic values of Design. Since certain hesitation is inherently formed, they are confined to decisive restrictions and ground rules. These restrictions are meant to be broken, yet students need a strong case to verify the same, with concrete evidence of design inspiration, process and presentation methods while maximising the vast knowledge database inherited from the first three semesters. This gives the Design Studio Guidance team an opportunity to move out of Conventional or Traditional methods and help students face the Design Problem with a unique outlook. This Design Teaching Methodology includes Integration of different subjects such as Building services, Landscape Design and Computer Applications in the Studio Schedule. The Project is divided into various Sessions like Research, Conceptual Design, Preliminary Design and Final Technical Drawings. Evaluation is done at every stage with emphasis on the process as opposed to the Traditional Method which lays emphasis on the end product.

Keywords: Architecture; Presentation; Design Process; Pedagogy; Architecture Student

1. Introduction

A creative response has to be generated before the absolute Design activity begins. Every project starts from a mental image that is formed in the student's mind and this can only be interpreted into the design with the help of pencil and paper. The emphasis therefore on the design process is maintained with the rough ideas and drawings also being evaluated along with the final design. As an Integrated Design Studio, it is more Fragmented than Amalgamated.

In order to experiment with the alternative method of teaching to impart architectural knowledge more effectively, comprehensive planning is done. Some of the methods suggested here may be already have been practised in other parts of the country in different forms. Effective learning: Making maximum use of the entirety that is learnt & reducing wastage of what is learnt. Not certified through pedagogic experiments but through experience and observation (in short duration) based study and arriving at logical solutions to the problems with conventional practices used in the context-study, based on samples of students – Contextual - General - Socio-Economic background - Exposure before and during the course. The Conventional Method or Traditional Method is listed as Context 1 and the Alternative Integrated Method is listed under Context 2. A detailed report of Context 2 is documented below.

2. Process of Evaluation

Evaluation and Grading of student's work have to be a transparent process. The Design Studio Team must have a justifiable means of evaluation. As the design is a conceptual product, subjectivity is quite important. Assessment is a bilateral issue and hence has to be a transparent process. Highlights of the Student's work are analysed by the student themselves so that the subjectivity will change according to the student's view as well. Grading as opposed to the number of marks is an optimal method that has reduced the subjectivity of a teacher due to the flexibility that it offers. The Evaluation process is done on 1 - 10 Scale with 10 being the best. These quantitative Data that is evaluated by the Design Studio Team is observed and recorded for this Design Methodology with the help of observation of students outcome in the form of Design Process.[1]

3. Stages of Design Teaching Process:

As the Studio begins for the semester, students are asked to recollect data and theories learnt in the previous semesters. Discussions are conducted on various topics such as Design Take Away points from the previous semester, knowledge gleaning and transfer from the studios and theory subjects from the previous semesters. A general outlook on what students

[1]*Deshpande, Shireesh A., (2013). Design Dialog: Dialectics of Design in Architecture, 1st ed. India: Council of Architecture*

have achieved so far and what they would like to learn from the present semester is surveyed and weighed.

Design Process depends on the process of evaluating a particular location through physical, mental and social characteristics with the ambition of developing an architectural solution that will both address and enhance its internal and external context.

Design Sequencing is done in order of the following:

Defining the Problem

Analysing the Problem

Developing Alternate Solutions

Deciding Best Solutions

Converting Decision into effective Action

The studio is then taken forward with a brainstorming session. The different aspects of a Design Project are discussed with activities such as Word Association and Abstraction Ladder. The Design sequence already discussed now goes about in the following stages according to the Weeks:

3.1 Week 1:

In the Research Stage students start collecting knowledge that is ready to access. This research focuses largely on understanding the people for whom it is being designed (User Analysis) and the data needed for the same. Research is a core part of the user-centred

design. Design research both inspires imagination and informs intuition through a variety of methods with related intents.

Coherent and logical studies are introduced to the students to effectively research the

Figure 1: Evaluation of Design Process at Research Stage

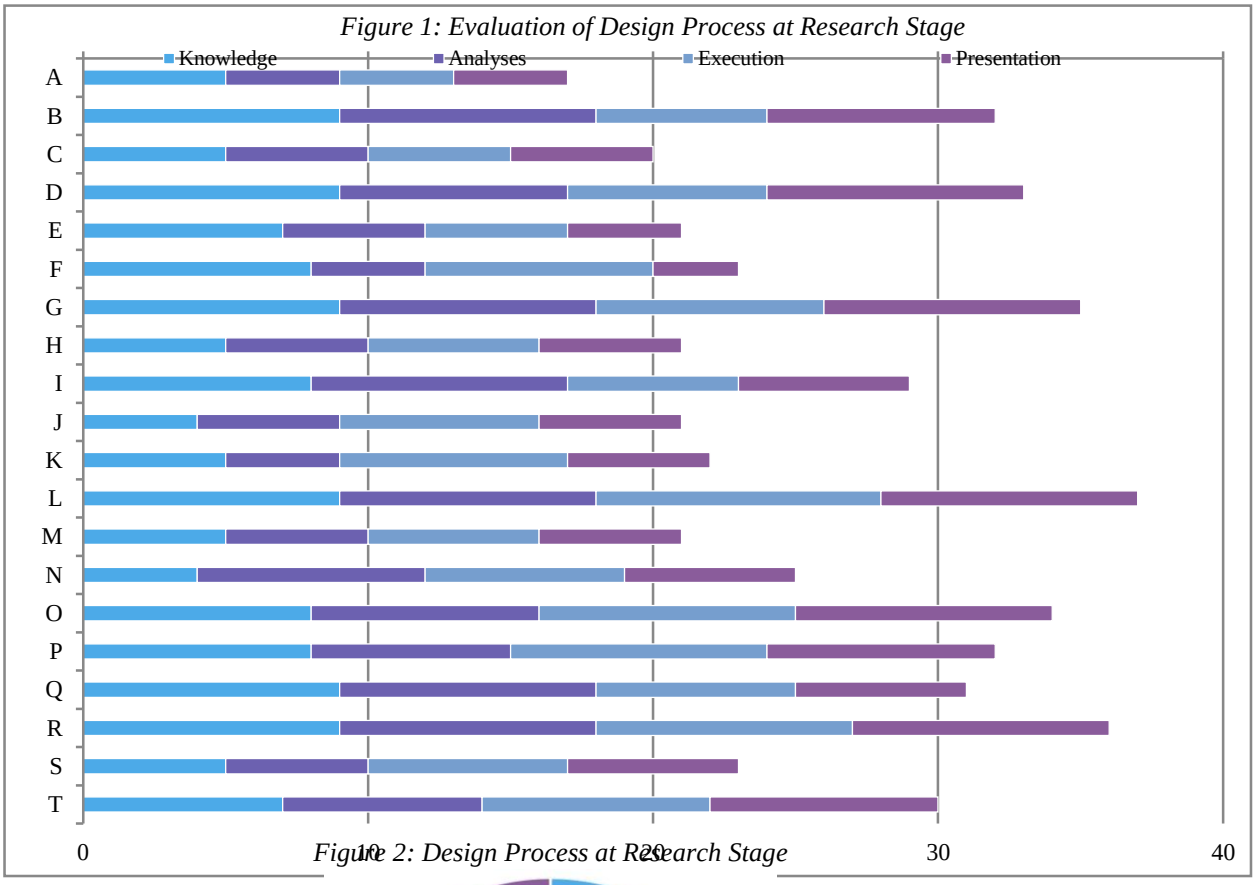
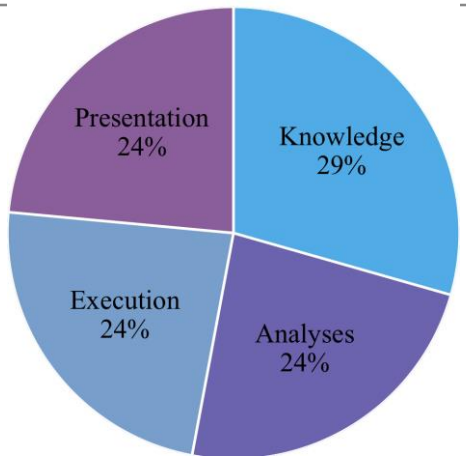


Figure 2: Design Process at Research Stage



Design Brief. These studies include, but are not limited to the following: Live Case Studies, Literature Case Studies, Data Collection on Standards and Design Ideas from online and library resources.

3.2 Week 2:

This is the Preliminary design (Predesign) Stage. Concepts are the designers' way of responding to the design situation presented them. The medium of translating the non-physical design problem into a physical building product. Site Study and Site Analysis is done simultaneously by the students. Varying topography, water courses, trees plants, habitats and

Figure 3: Evaluation of Design Process at Conceptual Design Stage

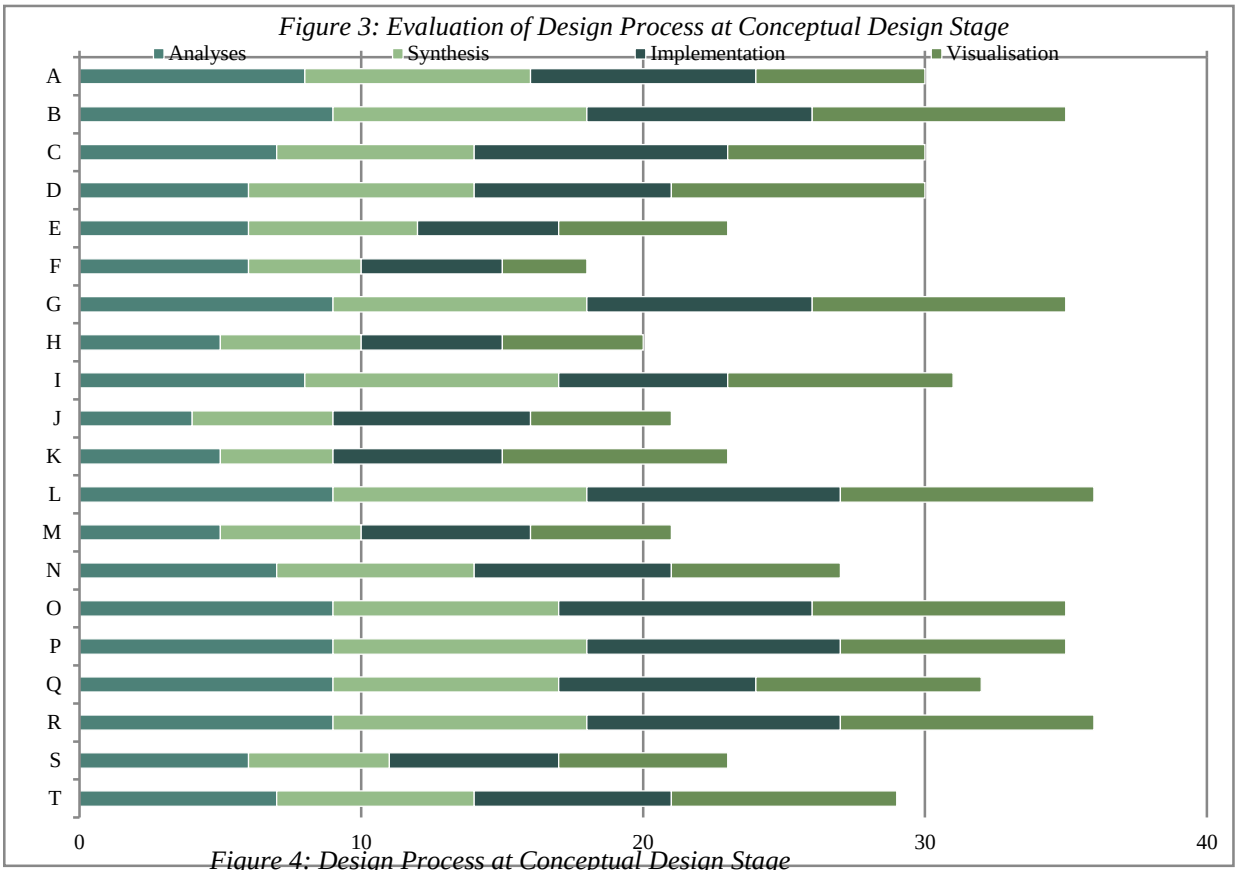
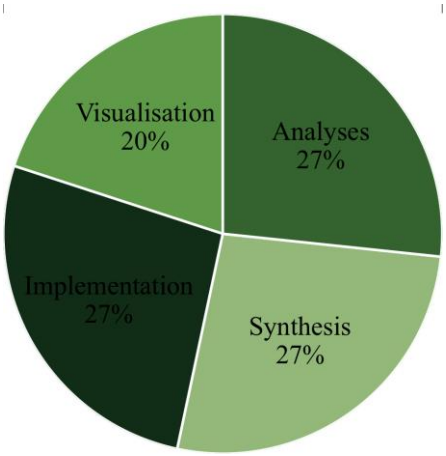


Figure 4: Design Process at Conceptual Design Stage



weather patterns influence the analysis of the site and the design process along with decision

making. To deal with critical issues, centrally themed air problem essences and the general issues of designing a building can be approached in a number of ways. Focus more on the early stages in design that is concept and direction. The approaches can be categorised as Functional, Materials, Contextual, Conceptual, Formal, Collaborations and Philosophical. The zoning, bubble diagrams and site analysis inferences are predominant in this stage.

3.3 Week 3:

This is the Preliminary Design Stage. This stage is where the student has to come up with sensible design solutions referred to and referenced from the conceptual design.

Figure 5: Evaluation of Design Process at Preliminary Design Stage

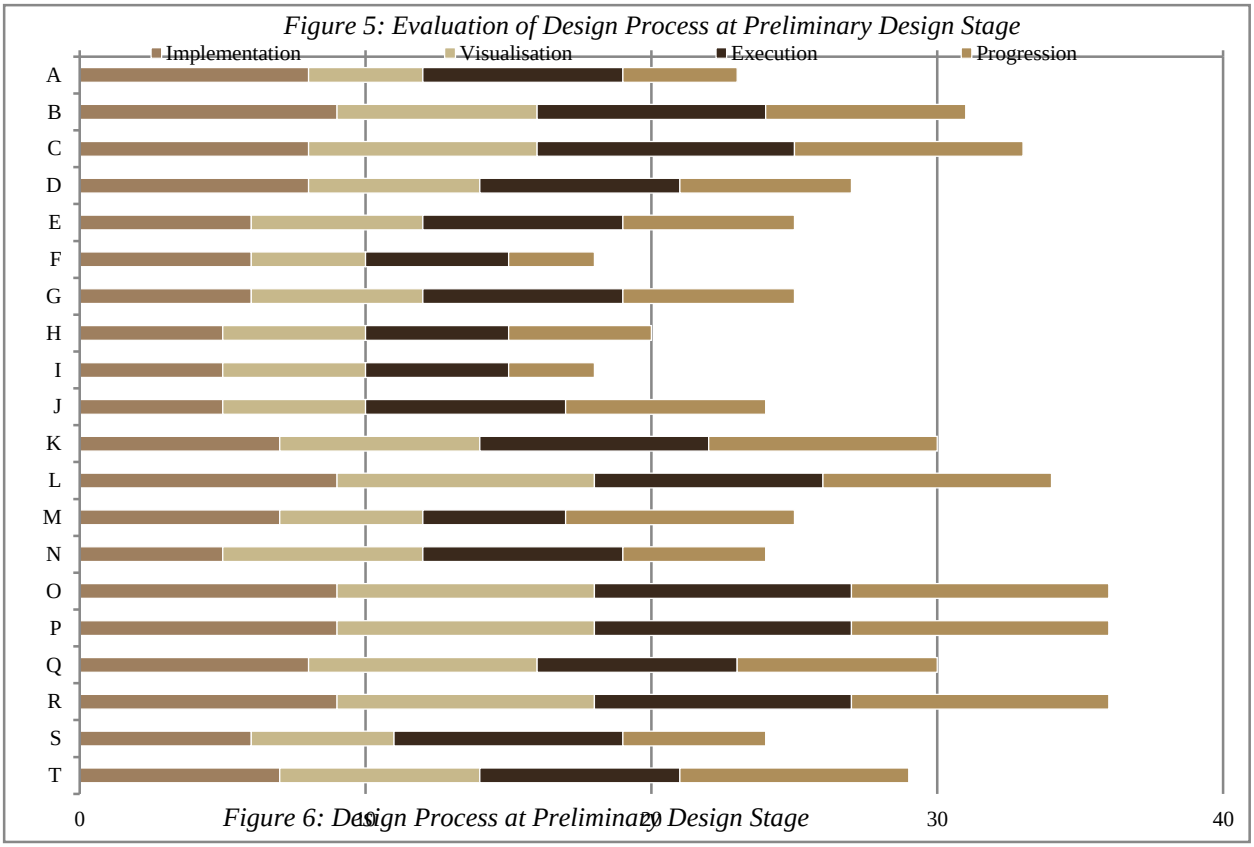
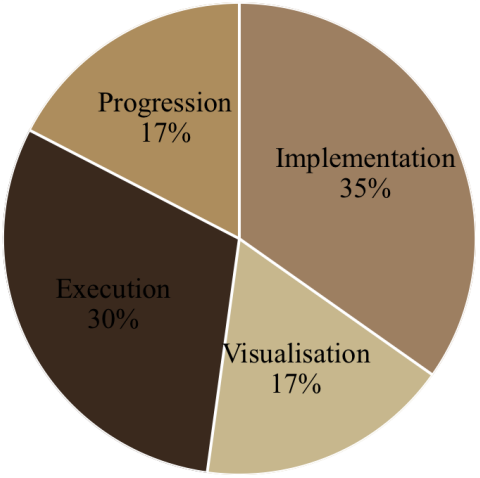


Figure 6: Design Process at Preliminary Design Stage



The preliminary design is executed and implemented by the students with the apt visualisation of the entire project itself. These are envisioned through View, Sections, Elevations and Spatial Planning. Emphasis is laid on working on Models and preferably Views of the design

3.4 Week 4:

When the final design of the building is completed and approved by the Studio Design Team, the student focuses on the design and documentation of the details of the project. This phase is the final where the presentation drawings are done. The scope of work for the final design

phase also includes physical models, coloured presentation drawings and in this particular Design Project an analyses presentation of a drawing in the style of a selected Architect (the

Figure 7: Evaluation of Design Process at Final Design Stage

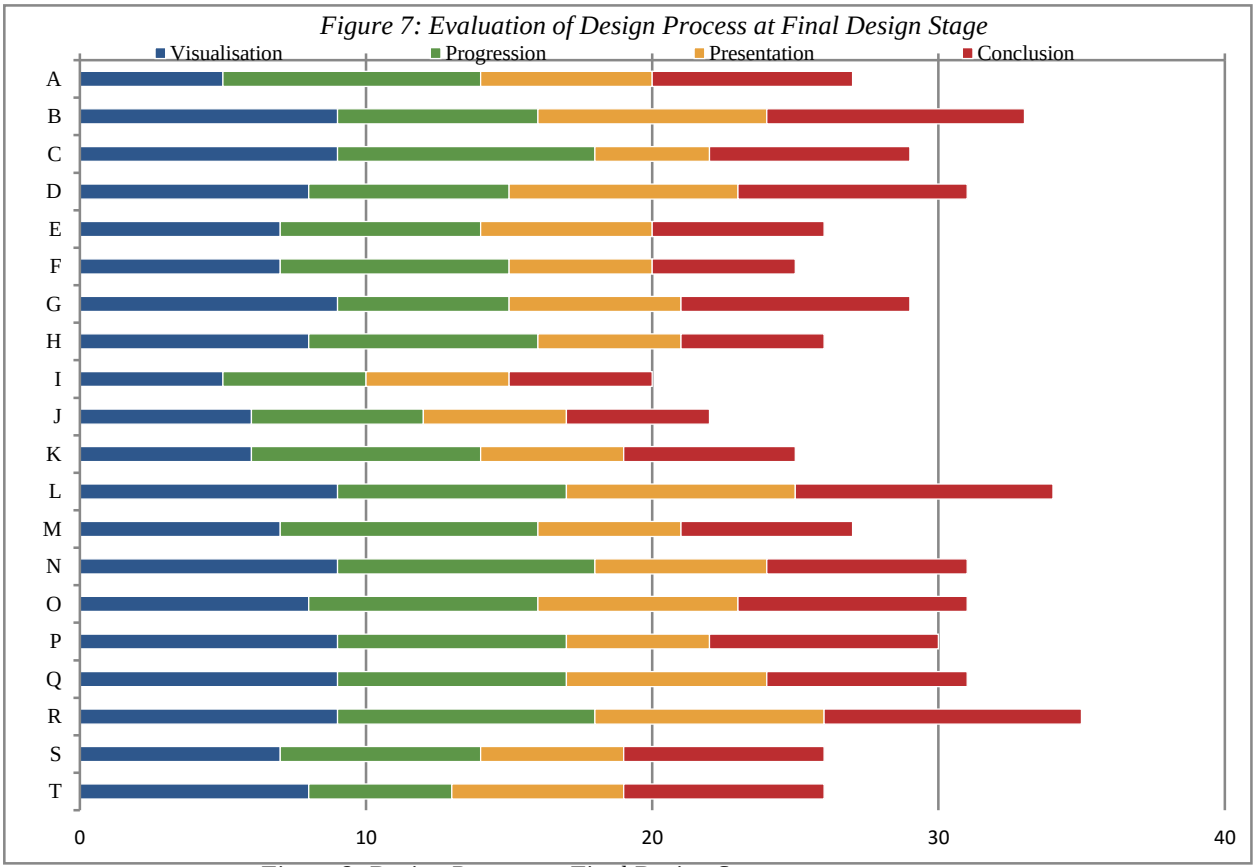
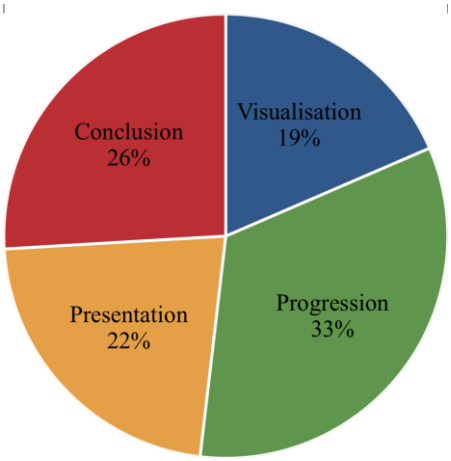


Figure 8: Design Process at Final Design Stage



Student is asked to work in the same with the help of the Computer Applications Team).

4. Conclusion:

When the overall result of the Finished Product in Context 1 and Context 2 are compared, there is a blatant difference in Visualisation of the Design by the students. Integrating various Subjects has helped students to work with better efficiently both qualitatively and qualitatively. To further improve on the Visualisation of the Students, when they work on the Massing and Forms, the introduction of activities such as Tangram Exercise, Peter Eisenman: Transformation of Cube, Paper Stacking and Addition Subtraction of Masses can be introduced.

5. Observations :

Pedagogical processes have been influenced in every era, but no pedagogical trend exists in a pure form. Design teaching methods have to take cognisance of the need to take a student along a psychologically appropriate activity of moving from what is known to what is yet to be known. In Context 1, all the research is carried out at the start of the Design Studio Process. Students tend to forget and we need to go back and forth while designing. The psychology of the student plays a major role in designing and enforcing a teaching method.

"*I hear and I forget. I see and I remember. I do and I understand.*"-Confucius.

It is important to work on memory improvement basics. In Context 2 students apply what they learn in the other subjects, which will help them memorise the needed facts made significantly efficient. Learning and practising new things at the same time period will make learning even more effective. The same fact when it is learnt in multiple ways will be understood and analysed more effectively. One Student discussing and tutoring another student gives scope for a detailed discussion on the information learnt. Applying the information practically in the studio as soon as it is learnt with the integration of the other subjects of the same semester will thus inherently increase the quality of the Design Process culminating in a better Finished Designed Product.

Acknowledgment

We would like to acknowledge the support and guidance extended by Architect Professor Munavar Pasha (Principal of JBR Architecture College, Moinabad, Telangana, India). We would also like to acknowledge the inputs that Architect Gayatri J. (Director of JBR Architecture College, Moinabad, Telangana, India) gave as feedback for the Design Teaching Methodology, both traditional and conventional.

The Student Batch that we observed are the 2017-2022 batch of Bachelor of Architecture students of JBR Architecture College.

References

1. Deshpande, Shireesh A., (2013). *Design Dialog: Dialectics of Design in Architecture*, 1st ed. India: Council of Architecture.
2. Edward De, Bono, (1983) *Teaching Thinking*, 1st ed.: Penguin Books.
3. Schmalz, Ben (2014) *The Architect's Guide to Writing: For Design and Construction Professionals*, USA: Images Publishing Dist Ac
4. Shah, Naresh & Anoakar, Prasad (2015). *an introduction to PREDESIGN*, India: Council of Architecture.
5. Ganshirt, Christian (July 20, 2007). *TOOLS FOR IDEAS, an Introduction to Architectural Design*, Birkhäuser Architecture; 1st edition.
6. Joy, Kenny. (Dec 1, 2014). Innovative methods in architectural education [Online]. 21(3). pp. 876-880. Available: https://www.slideshare.net/kennypjoy/innovative-methods-in-architectural-education
7. Bassamtabar, Reyhaneh (2018). The Enhancement of Learning through the Design Process: Renovating the Fort River Elementary School in Amherst, MA [Online]. Available: https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1715&context=masters_theses_2
8. Lee, Jinsop. Teaching Design: how I designed my first university course [Online]. Available: https://www.jinsop.com/teaching-design/
9. Chakraborty, Abhishek. What is Design Research? [Online]. Available: https://medium.com/coffee-and-junk/design-research-what-is-it-846aa69b7c91
10. Wong, Linda. What Are the Stages of Architectural Design? [Online]. Available: https://www.ehow.com/how-does_4926841_what-stages-architectural-design.html
11. Neha Kolhe. (2017). Innovative Tools and Techniques to Teach Architecture. *International Journal of Engineering Research and Technology. ISSN 0974-3154 Volume 10, Number 1 (2017) © International Research Publication House.* Nagpur, India, pp. 67-71.