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Crossing The Threshold: A Perception Towards the Inception Phase of Architecture Education

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ABSTRACT

A good beginning is half success. Being an Architect, is a journey which started from the moment someone realizes that "I want to become an Architect". It is that turning point of life when someone prepares for an expedition compelling a great perseverance.

Beginning from this dream – visiting a college of Architecture, Orientation program and the lectures, studio environment, informal conversations between friends and faculties, excitement of displaying & explaining their own work, experiences in first study tour and many other attributes in their new phase fills them with a spirit to soar in the field.

This threshold can be analysed with different perception by understanding the core aspects of teaching pedagogies and learning methodologies which will contribute in making a strong foundation of their career in architecture.

Freshers coming into the field are like moulding clay. Every day, their knowledge of theory subjects and drawing skills mould them and fire of submission deadlines strengthens them as professionals.

It is important for students to learn all the subjects in comprehensive manner and see them as part of a bigger picture. As such, the paper aims to explore the challenges and opportunities at initial phase of architecture education, in the context of inter-relation of subjects.

KEYWORDS: Threshold, Inception, Inter-relation, teaching-learning methodologies.

1. INTRODUCTION

As an educator, witnessing an inception phase of architecture education is a special experience.
The term 'Threshold' in this research is applied from psychological point of view. 'Crossing the threshold' represents a state of transition in the life of a student after choosing 'Architecture' as a career. The students are "at the beginning of a new and important event or development" if we consider a meaning according to Longman dictionary. By crossing this threshold students enter into new educational environment which molds them into 'Professional Architects'.

Let's talk about the age when someone decides to become an Architect. According to Erickson's Theory of Psycho-social development, students between the age of 12 to 19 are in the period of identity vs. role confusion, when they begin to search their own personal identity. This phase of students' life is very interestingly described by a great Architect and educator Ar. Christopher Benninger in his 'Letters to Young Architects.' He enlisted certain scenarios or backgrounds in student's life which are responsible for taking a decision of choosing this stream as their career option.
Few reasons can be enlisted as follows:

- Family business in this field
- Inspired by a glamour or works of famous Architects
- Expectation of artistic life
- Reluctance for other technical streams or getting less score in their entrance exams

- Seeking a white-collar profession

These reasons can vary according to the mindsets of different students and their way of looking towards own future life.

2. ENTRANCE EXAMINATIONS

While adopting Bloom's taxonomy in Architecture education, we come to know with various skill sets related to Cognitive, Affective and psychomotor domain. In most of the times, students & parents know about the psychomotor skills like sketching & drafting demanded by this profession. Students are well versed with these skills while preparing for entrance exams.
For architecture students, sketching plays a crucial role in expressing their thoughts at a rapid pace.

Starting from sharpening & holding a pencil, they learn strokes of different grade pencils on paper & how to put their imagination through memory drawings. Students lacking in this skill often face difficulties in preparing drawings during their curriculum where they are supposed to express their imagination for various projects.

3. ENVIRONMENTAL PSYCHOLOGY

A very initial stage after finalizing a favourite stream is to go out of their comfort zone. Students staying away from home for taking education, struggle to adjust with new environment. In this situation, a college environment contributed a lot in the growth of student through which he or she get connected with all the curricular & extra-curricular activities & their academic performance. Author S.K. Mangal in his book – 'Advanced Educational Psychology' specified that, different environmental forces i.e., physical, social or cultural forces have a desirable impact on the physical, social, emotional, intellectual, moral and aesthetic development of the individual. Bandura & Walters' social learning theory states that an individual acquires numerous traits and modes of behavior from many sources, and all these together contribute to the formation of their unique, distinctive personality.

This environment helps freshers to cope with the problems like home-sickness, for adjusting in this new phase of life which is essential for their academic performance. Also, the memories created in college during various activities, sports & cultural programs make an impact on their personal growth as an architect.

4. PEDAGOGICAL DEVELOPMENT

Right from the post-independence era, the institutes imparting architecture education tried to fulfil the demands of that decade required by the profession.
Our education tried to prepare younger generations for coping with the challenges in that era.

Let's take an overview of this generation which are currently taking architecture education in different institutes.

5. GEN Z

For understanding the challenges and opportunities in the inception phase, let's study the generation with which we are dealing for imparting the knowledge of architecture. Their way of behavior is a major factor which is considered in give and take process of information in the college. This generation is independent and capable of taking knowledge from various sources on the internet. Our traditional knowledge systems may not be preferred by them and it's a great challenge in front of educators to teach the contents of syllabus in more interesting ways which will make them strong enough to make their own identity in this field.

6. SUBJECTS

For making an inter-relation of subjects, let's go through various subjects in the syllabus of First year of architecture education.

Learning of humanities helps students to explore different civilizations in the world & how they contributed in the field of architecture with their distinct characteristic features.

Construction & materials are crucial subjects for learning construction techniques & materials available in the market.

The aim of basic design is the introduction of various visual components which help in preparing drawings aesthetically appealing. They learn about color theory, scale, proportion required for design composition.

Model making is included in syllabus to visualize a building in 3D form. They are introduced with different model making Materials, cutting pasting techniques, etc.

Graphics is the subject to learn technical drawings like plan, elevation, & sections.

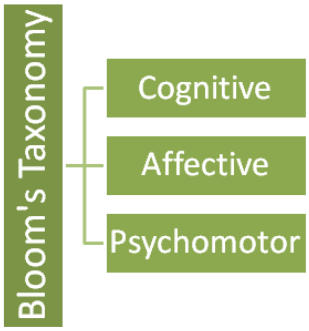
Theory of structures - a technical subject helps students to analyze a structural stability of building.
Subject – Software is introduced to enhance their professional writing skills as well as computer aided drawings.

All theory & drawing subjects which students learn in architecture curriculum help them to develop their thought process in Architecture Design which is the most important subject, lasts till their final semester and come out as their final project.

7. GESTALT PSYCHOLOGY

According to Gestalt psychology, an individual perceives the thing as a whole and not as a mere collection of its constituents or elements.
In the same way, for implementing various subjects in their Design project, students should be able to inter-relate the subjects which they study individually in their academics in the process of learning at their inception phase of architecture education.

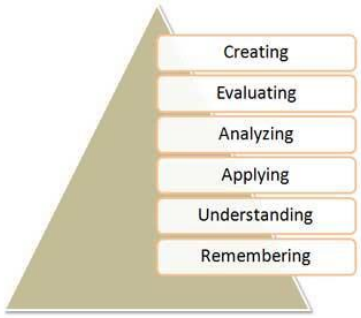
Let's understand the challenges and opportunities in their learning process at different levels with the help of Cognitive, Psychomotor and affective domain in Bloom's Taxonomy.



Source of image: www.toppr.com

8. COGNITIVE DOMAIN

Cognitive domain is related with the intellectual skills of students which they develop during academics.



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8.1 REMEMBERING

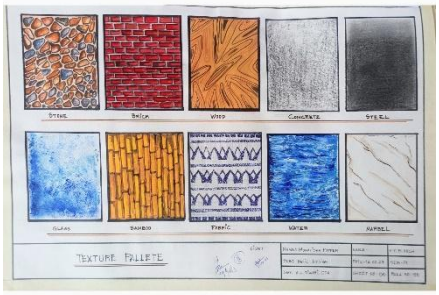
In the first level of architecture education, students are introduced with various meanings, technical terms and identification of different contents in the field.

For example, terminologies in the construction, characteristic features of different civilizations in humanities etc.

8.2 UNDERSTANDING

For example, in a theory lecture of materials and construction, basic elements of a frame structure and materials are taught with the help of power point presentation. Their level of understanding can be measured how they can remember and identify the components while they actually visit a construction site.

It can be also evaluated with the help of their work output. Following figure shows a sheet of basic design presenting a student's understanding of textures like stone, brick, glass, baboo, etc.



Source of image: Monalisha Ghosh – student
F.Y.B. Arch, (batch 2023) SKLTCOA, Mumbai

8.3 APPLYING

Application shows the level of understanding for a particular topic. Following picture shows a model where a student applied a knowledge of building elements & textures to form a model of building elevation in model making studio. Students also worked in the given scale which they learnt in a graphics studio.

Source of image: Kirti Bhoir – student
F.Y.B. Arch, (batch 2023) SKLTCOA, Mumbai

8.4 ANALYZING & EVALUATING

This level can be explained by an assignment of basic design where students were supposed to select any building and do its analysis in terms of different

subjects which they have studied in their first semester. We got an extremely appreciable output where they not only analysed their favourite structure but also interpreted their analysis in their own words.

Source of image: Muskan Shaikh – student
F.Y.B. Arch, (batch 2023) SKLTCOA, Mumbai

8.5 CREATING

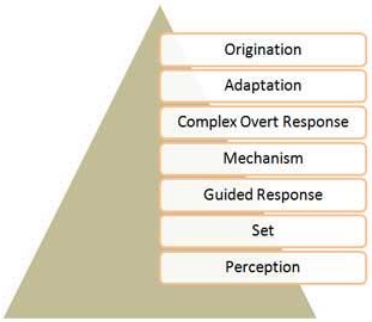
This is the highest level of cognitive domain in which student uses his/her analytic abilities to create own Design. Following image shows a model of a toll booth design project in basic design where student created a structure with his own ideas after analysing functional and aesthetic requirements of the project.

Source of image: Omkar Chavan – student
F.Y.B. Arch, (batch 2023) SKLTCOA, Mumbai

9. PSYCHOMOTOR DOMAIN

A Psychomotor domain of Bloom's taxonomy is related with motor skills or physical movements.
In architecture education, these skills are required in terms of model making of a designed project, also it helps in understanding the construction techniques on a site by using various building materials.

For elaborating this domain, I have selected a brick workshop organized by SKLTCOA, Mumbai, illustrating each level with the help of photographs in various stages of workshop.



Source of image: www.nwlink.com

9.1 PERCEPTION

In the first level of Psychomotor domain, students observe the steps taught by a mentor for learning a required skill.

In this level, first students attended a lecture given by Ar. Prajakta Adhikari madam who conducted a workshop and then observed the way in which she was aligning the bricks for constructing a bond.

Source: Author

9.2 SET

In the second level, students show readiness to act on whatever they have learned from the mentor.
In this example, we can see the students are passing the bricks to the selected site where they decided to prepare a model of brick bond.

Source: Author

9.3 GUIDED RESPONSE

In the third level of psychomotor domain, students continue their work with trial-and-error method, in the guidance of mentor. In this example, students started to align the bricks with their understanding. Also, they had a support of mentor while aligning the brick units.

Source: Author

9.4 MECHANISM

In this level, student achieves a basic proficiency in a skill on which he or she is working.
In this example, students prepared a basic model of brick bond by keeping bricks in position without using a mortar.

Source: Author

9.5 COMPLEX OVERT RESPONSE

In this level, students get an expertise in the selected skill. For example, in the later phase of workshop, students made a proper aligned brick wall model with the use of concrete as guided in the previous session.
They required less guidance in doing this activity compared with last session.

Source: Author

9.6 ADAPTATION

This level of psychomotor domain shows well developed skills in a particular activity. Students achieved a complex level & were discussing on solving the issues related with constructing a brick arch with faculties –
Prof. Manoj Parelkar and Ar. Prajakta Adhikari madam.

Source: Author

9.7 ORIGINATION

This is the final stage of psychomotor domain consist of highly developed skills in which a student creates something by solving complex problems in his or her own ways and forms a final product.

Source: Author

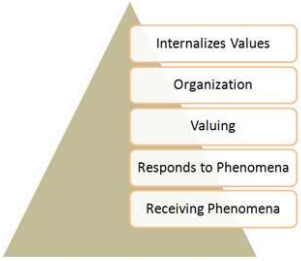
In this way, students gain confidence and a joy while learning a complex skill.

Source: Author

10. AFFECTIVE DOMAIN

Affective domain includes the parameters in which students deal with things emotionally. It includes enthusiasm, feelings, values, etc.

For explaining this domain, their phase of first study tour can be one of the best examples. Most difficult task for students related to this phase is their preparation to go out of their comfort zone. Here, an example of study tour to Goa-Kudal organized by SKLTCOA, Mumbai is taken as a reference for elaborating an affective domain.



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10.1 RECEIVING

Vernacular architecture of Kudal was gradually being understood by students while traveling in the bus through informal communication. Some students currently living in a city of Mumbai were having relatives in that place. Same place which they have been seeing from childhood, now they were observing from a budding Architect's point of view. Their emotional connection with a place helped them to study each part of it more curiously. A form, design, colour schemes, materials used in vernacular architecture of Kudal were deeply observed by students out of this curiosity to know the place thoroughly.

Source: Author

10.2 RESPONDING

They were introduced with the local materials like Red Laterite & Bamboo by visiting quarries and factories. Students participated actively in the Bamboo workshop which was organized to understand the system of bamboo construction & various techniques associated with the same. They enjoyed a team-work and the output resulted from a team spirit. Following figure shows beams made out of bamboo by learning joinery techniques.

Source: Author

10.3 VALUING

During the study tour, students were introduced with a distinct culture of Kudal & Goa, in which they saw various traditional artifacts made by local artisans & the values they imbibe in the culture of city. As they already had humanities in their curriculum, they could experience the glory of culture and its importance in studying architecture. Following images show a workshop organized by KONBAC in which students learnt about uniqueness of bamboo furniture & artifacts used in the interiors and students observing traditional artifacts in Goa respectively.

Source: Author

10.4 ORGANIZING

Students learnt to compare and analyze features of visited architecture styles during this study tour. They recorded the values in various mediums such as sketches, photographs, etc. in order to prepare an organized documentation of their first study tour. Following image shows a picture taken during their photography workshop with a sketch & actual scene of Fontainhas, later picture shows various elements of Church architecture observed in Goa.

Source: Group work of F.Y.B. Arch students in SKLTCOA, Mumbai. (Batch-2022)

10.5 CHARACTERIZING

Students gained confidence due to a study tour as they were working individually and in a team work by going out of their comfort zones first time, as mentioned earlier. So, the outcome of the study tour came as very excellent team work done by entire class. Following images show a group work of two teams representing the folk architecture of Goa and Kudal respectively.

Source: Group work of F.Y.B. Arch students in SKLTCOA, Mumbai. (Batch-2022)

11. CONCLUSION

After understanding each level of learning from Cognitive, Affective and Psychomotor domain and its application in the Inception phase of architecture education, we can conclude that the subjects in architecture are inter-related to each other.

For example, the horizontal & vertical lines they learn to draw with the help of T-scale & set squares in graphics studio are going to be the walls in their design project. If any student is lacking these psychomotor skills of drafting, he or she can't present her thought on sheet even though his/her cognitive skills are developed.

Materials they are learning in theory lecture of Building materials are going to include in their material palate from which they will select a material for bringing their imagination into reality. It means if any student has excellent sketching skills for drawing any material on paper, but he or she is lacking a knowledge of materials, a design will be incomplete.

If the design presentation of any student is reflecting an impact of culture, it shows the progressive level of affective domain in the student.

In this way, if student can see these subjects with slightly different perception, they can cross this threshold confidently for entering into an incredible world of Architecture.

12. ACKNOWLEDGEMENT

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