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Revival of Architectural Education in India – Can the New Education Policy help us?

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ABSTRACT

We have witnessed a fall in the student intake across architectural colleges in India in the last few years, the reasons being many. With the Supreme Court judgement of 2020, anyone without the title of an architect can also design and construct buildings, thus diminishing further the relevance of the "Ar." title acquired from a degree college. With the onset of corporate companies such as Livspace, Homelane, providing comprehensive mechanised solutions for construction industry, architecture will soon evolve into a Multi-National Company business. The fundamental issue with the education in architectural colleges is that it focuses on producing skilled labour for industry. This has pushed the entire architectural pedagogy into a structured and mechanical process of designing that oftens kills creativity and leaves little scope for dynamic learning. This paper intends to examine the current proposed New Education Policy and provide suggestions for its implementation with regards to architectural education in India. It focuses on a proposal where skill-based education for architecture is taught at the high school level, laying a strong foundation for future designers while the B. Arch. course can focus on ideologies such as sustainable design, global ideas and design practices with practical experience and industrial engagement.

KEYWORDS: Architectural education, Architectural colleges, Revival, India, New Education Policy.

1. INTRODUCTION

Approximately 24,000 architects graduate every year from around 400 architecture schools in India every year as against four lakh civil engineers. This is just 20% of the required number of architects as per the government statistics (TNN 2018). Though the demand for architects in the country is on the rise, the field of architecture is going through a gloomy phase. From admissions dropping down to just 36% with many institutions with just single digit admissions, to fresh graduate salaries ranging between 2.4 to 3.5 lacs per annum, on an average, is pushing many aspirants away from the field. When engineers, diploma holders, 3-month crash course certificate holders, celebrity designers with no formal architectural knowledge, compete with architectural graduates for work opportunities, a five-year architectural degree course costing 7 to 12 lakhs seems farfetched as a career option.

The current architectural education system focuses on generating skill-based employees instead of inculcating entrepreneurial skills in students. The gap between institutional teaching and market requirement is pushing new graduates to compete with people from other fields venturing into architectural design without the same educational qualification, blurring the lines between the practice of architecture and building construction.

Mechanization of the design process in the field of architecture post globalization has influenced architectural education in colleges across India. The current Indian architectural education draws its structure from the colonial education system, which aimed at nullifying regional creative processes based

on organic evolution and replaced it with mechanized repetitive processes. This change was effective in pushing Indians away from creative ideation and embracing skill based repetitive process for economic opportunities.

The Council of Architecture has effectively multiplied the number of architectural institutions from 137 in 2006 to 463 in 2020 and standardized the course structure to a rigid repetitive subject works suitable for marking in line with the engineering courses. The systematic erasure or reduction of allied subjects such as art, philosophy, music limited the course to draftsmen.

The primary reason for this scenario is the clear gap between design education in the primary school system and undergraduate system. An individual is equipped with Mathematics, science, Biology, and technologies from primary school education till undergraduate courses. This makes the aspiring individual capable of extending this knowledge and skills into engineering or medicine. Whereas for design courses like Architecture, fashion design and others, undergraduate education becomes the foundational course. Art and Craft in primary education involves very little application of thought and is often treated in a superficial manner and given lesser weightage and time.

This is pushing creative courses into structuring themselves around basic skills and vocabulary as the key requirement for the graduates. The skills sets are available in coaching centres for less than 25 thousand and 6 months. Thus, creating a competing market environment between 5 years under grad and a 6-month diploma holder. The NEP, which could have bridged the gap between foundational design education in schools and professional design education in colleges has become a disappointment.

2. METHODOLOGY

A mix methodology is adopted with review and analysis of research articles written on architectural education in India after 2008, analysis of changes brought through NEP in architectural pedagogy and practice, review of changes and evolution in architectural syllabus. We reviewed the architectural education foundational courses in comparison to medical and engineering courses from secondary school to undergraduate courses.

3. ARCHITECTURAL EDUCATION IN INDIA

When the British came to India, they brought with them technology, new materials and their education system and structure. For architecture, the system was Ecole de Beaux which had started in Paris and then spread throughout Europe including London (Prasad 2016).

The nature of courses that institutions offer is governed by the needs of those in authority. When the Britishers required trained craftsmen, sculptors, masons to execute designs that their engineers designed, we had the required courses imparted. As the need for draughtsmen emerged, institutions began to train them.

Do note that there has always been a need for skilled craftspeople, never a thinking brain. While there have been educators in the past who were exceptions to the rule of thwarting indigenous knowledge systems in education, the larger bias continued to loom and made us employable, but never a visionary. The first generation of Indian architects passed out in the 1930s, having undergone a formal architectural education, and with this, Indians slowly started having an impact on their built environment creatively.

Even then, architecture was largely taught through the Atelier system, where an apprentice learnt from an experienced architect by working with them, observing, and following how they handled a live project. Architectural education has been practice driven from then on.

Architectural education in India also diversified depending on whether the college in discussion affiliated itself to an Arts University or a Technological University, thus changing its thrust and inclination of pedagogy. Privatization of architecture colleges brought with itself the advantage of being autonomous, having a distinct identity and vision as well as disadvantages such as reeling under the pressure of attracting students for admissions and constantly marketing themselves.

The perception building that private colleges are trying to fast forward in the world today using social media as a catalyst, is better understood by educational institutions that have survived for centuries; that it is the word of mouth, the slow transfer of knowledge from one generation to another that builds reputation, of how an institution treats its faculty, and its students, what are the kind of experiences and exposures students go through in their course of architectural education, and how many people eventually pass out of the institution and spread out into the world.

4. COMPARATIVE ANALYSIS OF PROGRESSIVE LEARNING IN UNDERGRADUATE COURSES IN INDIA

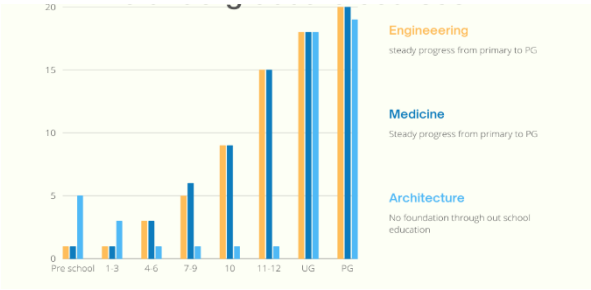

Fig. 1. A comparative analysis of foundation to undergraduate courses for the fields of Engineering, Medicine and Architecture.

The above graph chart shows the comparative analysis of subjects that are progressively taught from pre-primary to Undergraduate in a CBSE syllabus shows a clear lack in design education which is limited to basic colouring and artwork in preprimary and primary. An aspirant of architecture or any design course is eligible with 50% of marks in Math, Science and Chemistry but no need for design knowledge.

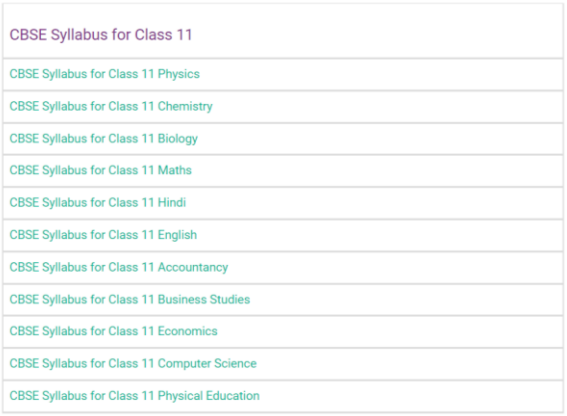

Fig. 2. CBSE Syllabus for Class 11

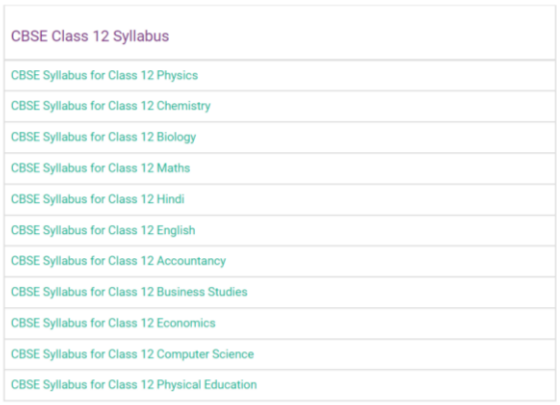

Fig. 3. CBSE Syllabus for Class 12

The eligibility for NATA entrance test is based on PU/11th&12th standard marks focused on technical subjects. The lack of foundational design education before joining architecture course is forcing the syllabus to orient in teaching basics for the first two years. In comparison engineering and medicine extend their course on the foundation of school and PU knowledge.

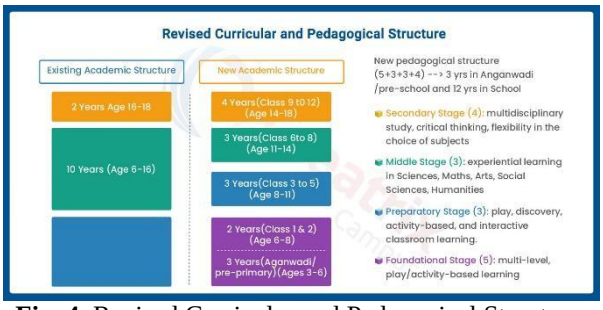

Fig. 4. Revised Curricular and Pedagogical Structure (https://www.creatrixcampus.com/blog/The-National-Education-Policy-NEP-2020)

The NEP – 2020 provided us with an opportunity to course correct the lack in foundation courses. But the lack of vison of COA and the completed admission process forced aspirants to opt for other courses, reducing the admissions to a record low.

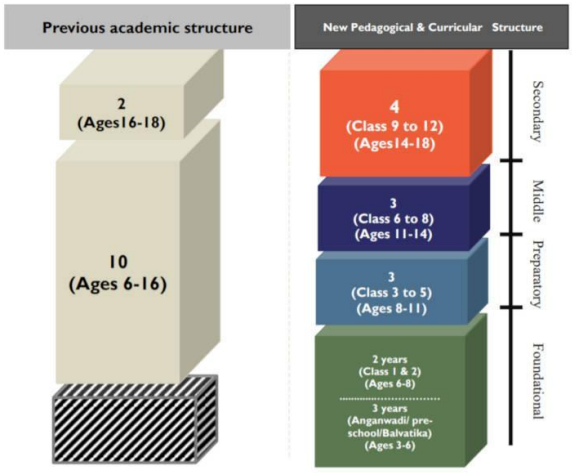

Fig. 5. Comparison between the old and revised Curriculum and Pedagogical Structure (source: https://shikshan.org/nep-2020/school-education/)

With the revised structure NEP provided with an opportunity for students to choose the subjects based on their interest. But the lack of availability of design education is forcing them to choose engineering or medicine subjects as primary. It is the necessity of the hour to introduce design education as an option in the middle and secondary schools that would lay a strong foundation for creative courses.

This can help in introducing skills and knowledge that is essential for a student to pursue any design course. In this case by the end of secondary school, a student would be equipped with a design skill set and knowledge adequate for employability. Further, this will provide the necessary foundation to start the UG course with a more robust framework focused on orienting the architectural students towards global needs rather than generating building designers.

Thus, the course of architecture can be reoriented towards generating architects that ideate the future of design and construction rather than competing with civil engineers and diploma holders.

With strong design education from secondary school, architectural education can get rid of foundation courses in UG and accommodate allied subjects such as art, music, advanced technologies. This will provide the students with an opportunity to equipe themselves with real-time issues of the architectural world and market ready.

This can provide employment opportunities from secondary school graduates to undergraduates. With the reorientation of foundational courses in school, the UG course can accommodate one year of practical experience as part of 5-year course. Thus, the students will be equipped with theoretical and practical knowledge to pursue professional or academic careers. This will help in eliminating the need for masters by integrating it into 5th year (one year) program. Hence an opportunity for students to continue their research to PhD if chosen.

Table 1. A comparison of basic salaries between Medicine, civil engineering, and architecture

	MEDICINE	CIVIL ENGINEERING	ARCHITECTURE
Eligibility	10+2 with biology as a mandatory subject. Candidate with a diploma is also eligible	10+2 in Maths as a compulsory subject. Candidate with a diploma is also eligible	10+2 in Math, science, chemistry subjects. Candidate should have secured 50% minimum in each subject
Courses	5 Years for undergrad	4 Years for Undergrad	5 years for undergrad
Job Profile	Doctor, Radiologist	AE, JE, Superintending Engineer, Project Engineer, etc.	Architect
Area of Work	Healthcare	Electricity boards, Railways, Naval, Education, Information Technology	Building construction
Average Salary	INR 4,00,000-INR 12,00,000	INR 3,50,000-INR 25,00,000	INR 2,50,000 – INR 7,00,000

A comparison of basic salaries between Medicine, civil engineering, and architecture indicates the lack of proper pay scale for architecture graduates despite spending the same amount of time and money. As explained above the primary reason is the lack of foundational design knowledge in school which is forcing the UG course into a foundational course oriented towards skill development rather than ideation and philosophical knowledge which architecture is intended to be.

The study of CBSE class 11 and 12 syllabus main subjects indicate a clear vision of integrated development and opportunity for students of all major fields except architecture (Central Board of Secondary Education 2022). The lack of design education at 11th and 12th standard is making architectural entrance inclined towards memory and representation rather than ideating and reasoning. NATA, the central entrance exam conducted by COA adapted similar pattern to that of JEE (Council of Architecture 2023).

The selection of subjects in 11th and 12th determines the orientation of students with entrances for UG courses restrict the eligibility criteria. Each entrance exam is foundationally based on the 11th and 12th syllabus originating from standard 1. For NATA entrance, the prior knowledge is dependent of coaching centres offering 2 to 3 months crash coaching rather than 11th and 12th education. The coaching in these centres is oriented towards general mathematics, aptitude, and which are MCQ and MSQ format (Council of Architecture 2023).

The lack of introduction to architecture education in 11th and 12th standards is pushing the UG syllabus into a foundational course orienting towards providing skill and knowledge to design buildings. This is overburdening the course and making the syllabus into an introductory course for building designers rather than thought provoking architects.

It is essential to introduce architecture education through design pedagogy into the school system to lay a strong foundation for future architects. It is essential to ease the burden on UG colleges to teach from foundation to professional subjects with practical experience within a span of 5 years. This can easily be achieved through percolating architecture and design knowledge into the school system. Through this we can generate awareness and train the young minds with the skillset required for an architecture student. This helps in utilizing the NEP framework to the maximum extent possible to provide room for thought, ideation, and specialisation rather than teaching building design.

The syllabus of architecture in India has been stagnant for over 3 decades with no significant changes. Relevant discussions and ideas on implementing stark changes in architectural education can be seen in the documentation available of the Seminar on Architecture, edited by Ar. Achyut Kanvinde (Prof. Parelkar 1959).

The percolation of architectural knowledge to all segments of the society over time and standardization of design through byelaws, vastu and material mass production made the industry friendly to any person with basic skills of drawing and 3d visualization. This is pushing qualified architects to compete with professionals with diplomas in interiors to experienced contractors turning into designers.

It is of the utmost importance for the Council of Architecture to utilise the New Education Policy to course correct the field of architecture education from becoming building designers to professionals that ideate and provide direction to builders and non-architects in shaping the cities and society.

With our current readings from different sources, it is feared that NEP implementation may become a missed opportunity by COA in pushing the boundaries of architectural education in the right direction. The restriction of architectural education to UG and above is limiting the pedagogy to a stagnant framed structure.

The advances in the field of design and technologies such as Artificial Intelligence and Virtual Reality are limited to an introductory subject rather than full design and research subjects. If the architectural future of the country is to advance, it is important to unitize the NEP framework and push for design and architectural education into secondary school and evolve the undergraduate course syllabus into contemporary world architectural problem-solving course rather than building designers.
This revision in framework would provide the fraternity with qualified professionals and researchers that can push the boundaries of architecture.

5. CONCLUSION

Architectural education is not simply the imparting of knowledge and skills necessary for practice but involves the development of values and philosophical positions (Mazumdar 2013). Architecture is a finishing school of sorts, where one gets clarity by completing a set of tasks, which may seem irrelevant in the present context, but in the long run, gives one a taste of an opportunity that one might want to explore in the future.

NEP is a great opportunity to reorient design education in India. But the lack of vision towards architecture and design courses is pushing the fields into extinction. The following are the suggestions that should be considered while implementing NEP in colleges to revive architectural education.

1. Introduction of foundation design education in middle and secondary education.
2. Creating single entrance test for all creative courses based on the foundational education oriented towards, architecture and design.
3. Utilizing 6-8 and 9-12 grade classes for design education with specialized elective in Architecture, design, fashion, and other such creative courses.
4. Mandating design education from 6-12 grade classes for architecture and design entrances examinations.
5. With foundation education (B.Arch – year-1 & 2) shifted to 6-12 grade classes, B. Arch can start with ideation and design philosophies oriented towards future needs rather than mass producing buildings.
6. This will help in (re)introducing art, music, cinema, technology (AI) as part of 5-year undergraduate course.
7. The 5-year undergraduate course can be split to 3+1+1 with 3 years for theoretical education, 1 year of practical experience, one year of research. Thus, it will be an integrated UG+PG course, as suggested in the NEP.
8. This can further students to pursue 3-year PhD with robust design knowledge from middle school itself.

It is essential to utilise the NEP in reorienting the architectural course and design education to prevent it from further deterioration. The Design Build and BIM Pedagogical model (Prasad 2016) that has found its place in educational systems around the world, when contextualized to India, may prove to be a holistic approach that we are currently missing as professionals locating ourselves in the construction process, but this needs to be tested before we realise its effectiveness. Equal importance must be given to the theory as well as the practical sides of architecture (Kuriakose 2018).

Architects are the thinker-doers thrust with reconfiguring the environments within which they live. (Benninger 2014) The essence of architecture is to be a visionary who derives connections that haven't been seen before, leading towards innovation. We may develop and upgrade skill sets that make us market friendly and increase our job prospects. Employability skills are core knowledge of all aspects of architecture, including project management skills, analytical skills, problem solving skills, communication skills, and a good attitude towards continuous learning (Pashmeena Vikramjit Ghom 2023). While these are mandatory and beneficial, care should be taken that they do not limit us to being just employees in an organization. A practice that survives by absorbing graduates who may have skills but lack the ability to think critically and innovatively is one that only repeats conventions of the past, or one that does not go beyond surface imagery (Chandavarkar 2018).

Subservience comes naturally because it is so deeply ingrained in our colonized selves. This subservience makes us very employable. We listen to orders and mould ourselves as per standards to perfection, often forgetting that we can be change makers, entrepreneurs and create something new that causes ripples in the existing system to bring about a necessary change.

For architecture to become larger than what it has currently been reduced to, we will have to locate ourselves in other fields. We must bring our own seat to the table in the fields of town planning, politics, information technology, set design, movie making, marketing, user interface, gaming, event organization, hospitality, aviation, marine technology, and many more. We need to start imagining architects in advisory positions, since we are the ones who can see cross connections and who never fall short of ideas when it comes to initiating and executing the same.

It is time to redefine our identity as architects and the role we play in society. Let's do this using the current NEP as a building block and bring out an academic reform that informs the next generation about better design sensibilities from a younger age, before it gets too late, and we find ourselves obsolete.

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