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ARCHITECTURE EDUCATION IN INDIA: AN ANALYTICAL STUDY OF CURRICULUM AND ITS ALIGNMENT WITH MODERN-DAY DEMANDS

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ABSTRACT

By critically examining the current architecture curriculum in India, this study aspires to determine the relevance of education in addressing the demands of an evolving profession. To analyze these aspects and their relevance to modern day, the study investigates the overarching framework provided by regulatory control and implementation by academic institutions, focusing on the curriculum structure, content, and pedagogical methods employed in architectural education to determine the incorporation of contemporary themes such as sustainability, technological integration, and interdisciplinary collaboration. A total of 100 people, including students, educators, and experts, were surveyed using a structured questionnaire. The results indicate that there exist critical disconnects between an existing curriculum and the applied tasks of contemporary architecture, suggesting a need for curricular change. It calls for a proactive, practice-related approach that integrates trends and standards with global perspectives on preparing our graduates within the sphere of built environment challenges.

Keywords: Architecture Education, Curriculum Analysis, Sustainability, Pedagogy, Technological Integration, Interdisciplinary Collaboration, India

1. INTRODUCTION

Architectural practice, whether as an academic discipline or as a professional practice, responds to the socio-cultural, environmental, technological and economic circumstances at hand. Architecture Education in India has witnessed significant evolution since its formalization, but it still struggles to align itself with the curricular needs of the 21st century. The fast-changing urban dynamics, imperatives of sustainable and inclusive growth as well as infusion of digital

technologies made it imperative to co-evolve the architectural education given in Indian institutions.

As per the order of Council of Architecture (COA), the curriculum of the current academic session is an amalgamation of design aspects, technical insights, and practical implementations. But there are still reservations about its ability to generate graduates who are technically proficient and socially conscious, environmentally sustainable and technology savvy. Unfortunately, the gap between what is taught in academia and real-world practices in architecture leads to graduates who are not adequately prepared for the realities of practice in today's professional contexts.

This article undertakes an analytical study of architecture education within the context of India and what it seeks to analyse is the current state of the curriculum versus the relevance with regard to current and stage of emerging demands. We look at content, pedagogy, and assessment practices across selected institutions versus global benchmarks and industry expectations. Drawing insights from academia, students and practitioners, the study examines the alignment of the curriculum with the realities of practice and professional aspirations.

It is hoped that the findings will generate more interest in future and practice sensitive curriculum reform among educators, policymakers, and institutional stakeholders. Despite this, by highlighting areas of key conceptual and structural deficiency, this research argues for a curriculum that sustains the cultural legacy of the discipline while simultaneously evolving through innovation, sustainability and interdisciplinary working.

1.1. OBJECTIVES

The aims of the study are

- To critically analyse the existing structure, content and pedagogy employed in the architecture education in India, as prescribed by regulatory bodies and academic institutions.
- To compare how much of the current curriculum is geared towards current professional environments, including sustainability, technology, and interdisciplinary collaboration.

2. LITERATURE REVIEW

The pedagogical evolution of architectural education in India has been informed by colonial legacies, post-independence nation-building objectives, and global pedagogical preoccupations. Stood firm on the Beaux-Arts fitting, then informed of the Bauhaus philosophy, Indian higher architectural authority is primarily design-based instruction, studio-oriented learning in the first place. Scholars and professionals alike have called into question the relevance and responsiveness of the current curriculum to the shifting dynamics of society, economy, environment, and technology.

Most of the existing curriculum in Indian school of design heavily relies on traditional approach to design and lack coverage of the emerging domains like sustainable design, climate responsive design, digital manufacturing, and social design Chakrabarti, 2007. This disconnect between the academic nature of architectural instruction and the real-world focus it inherently should have is again echoed by Mahgoub (2014) who stressed that architectural education is required to

shift from a content-based thinking that is about the discipline from that of a problem-oriented and multidisciplinary form of investigation.

The statutory body governing architectural education in India, the Council of Architecture (COA), prescribes a common curriculum framework for all approved institutions. This might ensure standardization but at the same time builds a rigidity, reducing innovation at the institution level. According to Ramesh and Gupta (2019), a "one size fits all" approach cannot address the regional diversity of architectural practice and the unique socio-cultural context of Indian cities and towns.

Another important stream within the literature centres about the application of sustainable and resilient design principles. According to Singh (2016) teaches that yet often, considering the wide-ranging environmental challenges facing India, green building and sustainability are taught as secondary ideas in architectural education rather than integral ideas. Likewise et al. (2020) advocated for embedding climate-responsive design thinking throughout all years of study and hands-on, contextualized learning rather than theoretical instruction.

Another aspect that is getting more silos to brick is the incorporation of digital technologies. Tools like Building Information Modeling (BIM), Geographic Information Systems (GIS), and parametric design have revolutionized architectural practice worldwide. Kumar (2021) observes that as many institutions in India do not have the infrastructure or trained faculty to teach these tools effectively, there is a pedagogical reach where the industry need does not match the educational supply, leading to a gap between graduates and professional experience.

Pedagogical strategies are also an important focus of existing studies. Mehta & Shah (2018) promote a move away from teacher-centered to learner-centered approaches, with a focus on peer learning, co-design of projects, and community-based design studios. Experiential learning, internships, and interdisciplinary engagements are considered crucial for the development of holistic professionals. However, institutional limitations, archaic syllabi, and exam-centric evaluation systems usually dissuade such practices.

Global comparative studies have also flagged that India is trailing behind in aligning its curriculum with global best practices. UNESCO-UIA. (2017) Principles for guiding architectural education around the world. Critical thinking, ethical responsibility, lifelong learning, and global citizenship. Indian curricula, when compared to the best-built curricula in architecture schools globally, lag in flexibility in the learning methodologies, introducing research and global exposure.

Moreover, according to Bandyopadhyay (2022), the disconnect between academia and practice persists. Too often graduates enter the workforce without sufficient exposure to the practicalities of real-world challenges such as stakeholder engagement, policy frameworks, construction management, and socio-political constraints. Such discrepancy leads to a long transition state of practice after graduation, which questions the relevance of architectural studies.

In short, the literature suggests an increasing consensus among architectural educators in India for reform in architectural education in India. Key themes include the emergence of sustainability and technology as cores of the curriculum, the further building of flexibly designed degree programs, deepening of academia-industry partnerships, and development of critical and contextualized thinking. But too often, these ideals go untransformed into complementary changes in the

institutions we govern by rule and regulation, by contractual and collegial obligation, by resource constraints and inertia.

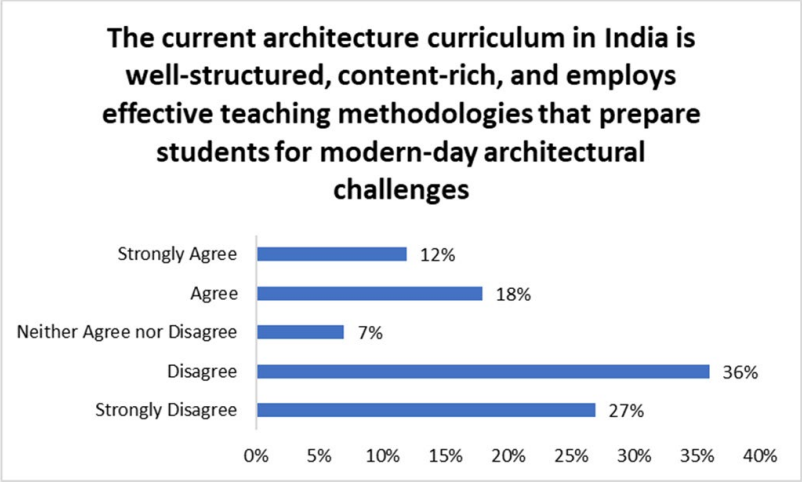
In contributing to this important dialogue, this study draws on data collected in the context of architecture education in India, thereby providing an updated iteration of what is already known about the architecture curriculum. The study synthesizes academic critiques with perspectives from the stakeholder groups, including students, educators and practitioners, to return grounded recommendations for aligning architectural education with contemporary imperatives.

3. METHODOLOGY

In the current study, a descriptive and analytical research design has been followed to evaluate the architectural curriculum in the country and relevance to contemporary professional needs. A structured questionnaire with closed-ended, Likert scale, and open-ended questions was used to tabulate primary data, ensuring responses on the various aspects of the curriculum (e.g., relevance, technology integration, sustainability, and readiness for professional practice) were documented in depth. We used a digital questionnaire to navigate geographical reach and ease of response. Respondents in direct contact with education, namely final-year B. Arch students, faculty members and practitioners engaged with academia or involve in design a curriculum, were purposively selected. The set of data was divided between known architecture colleges and practitioners from different parts of India to cover institutional and geographical representation. A total of 100 respondents participated in the study, which was deemed adequate to provide initial insights into the effectiveness and relevance of the existing curriculum in equipping students to face the contemporary landscape of architecture.

4. CRITICAL EXAMINATION OF THE STRUCTURE, CONTENT, AND PEDAGOGICAL APPROACHES OF THE CURRENT ARCHITECTURE CURRICULUM IN INDIA

Currently, the prevailing curriculum which is regulated predominantly by the Council of Architecture (COA) adopts a common five-year program architecture, inclusive of design studios, theory subjects, and an obligatory internship. Okay, but this structure is very rigid and has limited options for exchanging ideas thanks to interdisciplinarity and cross-bound innovation. While architectural basics are commonly addressed, there is insufficient focus on current issues like sustainable design, climate-resilient buildings, the use of smart technologies, and digital tools like Building Information Modeling (BIM). Nor are the pedagogical approaches innovative, heavily reliant as they are on lecture-based, mentor-led studio models with little to no experiential learning, collaborative project work, and research-based practices. Most institutions still do not implement a blend of practical exposure, real-world partnership, and the use of technology. Anyway, the curriculum is an important base, but it needs revisions to be relevant, responsive, and match global and professional needs today and in the nearest future.

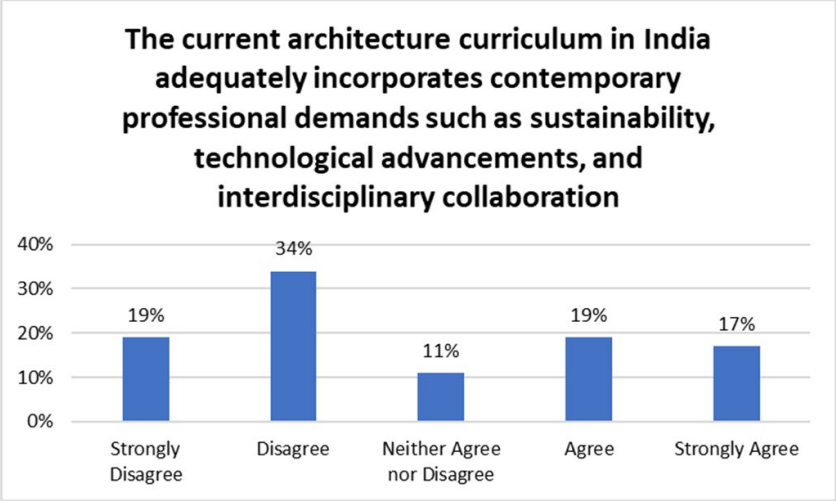


The replies to the statement reflect that the current architecture curriculum in India is perceived as largely negating. The third question of the survey asked users if they agreed with the statement that their curriculum is set up correctly. A good amount (36%) disagrees, with 27% strongly disagreeing. Only a minority of respondents (18%) agreed, and even fewer (12%) strongly agreed, it can be judged that the curriculum aligns well with today's architectural challenges. It is notable as well that 7% of the sample falls into the neutral category (neither agreeing or disagreeing), which indicates some uncertainty or ambivalence with the effectiveness of the proposed curriculum. Such a distribution suggests a dire need of curriculum reform, as well as many concerns about whether the existing curriculum is relevant and adequate to prepare students for the changing needs of the architectural profession.

5. EVALUATE THE RELEVANCE OF THE CURRENT CURRICULUM TO THE DEMANDS OF MODERN PRACTICE, SUCH AS SUSTAINABILITY, TECHNOLOGY, AND COLLABORATION ACROSS DISCIPLINES

Although the diverse curriculum is experiential enough, something is significantly lacking in with respect to its present role in the profession. When it comes to sustainability, the curriculum frequently falls short in addressing emerging environmental challenges, including climate-resilient design, sustainable building materials, and energy-efficient systems, all of which play a vital role in contemporary architectural practice. Likewise, there's some exposure to tech development (i.e. CAD, & a bit of BIM) but there is little to no inclusion of more advanced tech tools, i.e. parametric design, AI, or smart building systems within the institution — save for a few exceptions. Also, the curriculum is rather siloconed, with not much emphasis on inter-disciplinary collaboration, which is all the more important to have in modern architecture, wherein design projects seek inputs from urban planners, engineers, environmental specialists, and other experts. Consequently, although the current faculty's education forms the basis of what all current students learn, it fails to ensure that they acquire the information and abilities needed to succeed in a profession that is evolving daily and in other professional best practices (such as sustainability, technology use, and cross-disciplinary work). This illustrates the necessity for curriculum reform that more

faithfully reflects the increasingly dynamic, interdisciplinary, and technology-driven character of contemporary architectural practice.



Responses to the assertation indicates a predominantly negative belief that the current architecture curriculum meets contemporary professional needs. 34% of the respondents disagreed and 19% strongly disagree, clearly showing their dissatisfaction with the curriculum's inclusion of the key factors such as sustainability, technological advancements, and interdisciplinary collaboration. Nineteen percent agree and only seventeen percent strong agree indicating a minority of respondents feel the curriculum covers these modern needs sufficiently. Moreover, channeling 1% shock about it, causes the other 11% to be neutral. In summary, the findings put forward an evident disconnect between the current curriculum and what the changing professional landscape demands, which reveals the need for reform in the curriculum to align more closely with modern day trends and issues.

6. CONCLUSIONS

Thus, in context, this study makes the argument that while the current architecture curriculum in India is based on established pedagogical frameworks, it is inadequate in addressing the contemporary demands of evolving architecture. An in-depth assessment of its framework, contents, and pedagogical approaches—the performance of each pinpoints missing links in sustainability, technological advances, and cross-disciplinary co-creation—crucial in the contemporary job market. The responses from respondents reinforce this observation, indicating a general displeasure and a call for reform. We have to review and revise the curriculum in order to ensure our architecture graduates will be able to meet the demands of contemporary times and adhere to global standards to create a better, more future-ready, robust and inclusive educational environment.

7. RECOMMENDATION

The study shows a lack of proper architecture curriculum in India that meets the requirement of the profession and therefore, calls for a complete redefine and restructuring of the curriculum as per the need of the present scenario. More focus in both content and practice should be on important aspects such as sustainability,

digital technologies (BIM, parametric design, smart systems, etc) and interdisciplinary collaboration. Regulatory bodies such as the Council of Architecture (COA) must work hand in hand with academic institutions, industry experts, and practitioners of the craft to revise curriculum plans which genuinely address the challenges and progress of the times. Continuous curriculum improvement, in-house faculty development programs, adoption of global best practices, and above all the pooling of available resources by both the architects and the academics will go a long way in strengthening the architectural education in India.

CONFLICT OF INTERESTS

None.

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