SYNOPSIS OF

STUDIES ON THE PRESENT ARCHITECTURECURRICULUM IN INDIA AND ITS RELEVANCE IN TODAY'S CONTEXT

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SYNOPSIS

This study investigates the evolving dynamics and challenges within architectural education in India, assessing their influence on both academic training and professional practice. Tracing architecture's journey from a traditional craft to a recognised profession, it underscores the pivotal role of statutory and regulatory bodies in shaping educational standards and professional benchmarks. Institutions of architecture serve as critical platforms for cultivating the knowledge, skills, and attitudes essential for sustaining and advancing architectural practice. In the twenty-first century, empowerment of architects demands not only a strong foundation in core disciplinary knowledge but also the integration of relevant employability skills. This raises an urgent need to define and contextualise these competencies for contemporary professional realities. Addressing this gap requires focused research to establish clear parameters and measurable indicators that can guide curriculum design and professional development. By doing so, architectural education can move beyond aspiration, fostering graduates who are not only professionally competent but also creative, adaptive, and capable of driving innovation and societal progress.

Chapter 1: Introduction

This study examines the evolution of architectural education in India, assessing its alignment with the demands of contemporary professional practice. While architecture as a discipline continually adapts to technological advances, environmental imperatives, and social changes, India's undergraduate curriculum remains rigid, theory-heavy, and slow to incorporate emerging trends such as sustainability, digital technologies, smart cities, and interdisciplinary collaboration. Key gaps include inadequate integration of advanced tools like BIM, parametric design, and VR, limited real-life exposure, minimal focus on managerial competencies, and insufficient flexibility for specialization.

The research investigates whether the existing curriculum meets industry needs, how rigidity affects adaptability, and the extent to which graduates are prepared for practice. It also explores barriers to technology adoption in education and the role of the National Education Policy (NEP) 2020 in driving reform. The objectives are to evaluate curriculum–industry alignment, assess adaptability to emerging trends, examine practical training effectiveness, identify technology adoption challenges, and recommend reforms for a more industry-oriented, interdisciplinary framework.

The study is guided by hypotheses comparing the sufficiency of the current curriculum against the need for significant reform, with emphasis on flexibility, skill development, and responsiveness to evolving professional and societal contexts.

Chapter 2: Literature Review

The literature review establishes a critical foundation for evaluating architectural education in India, tracing its historical trajectory, assessing current pedagogical practices, and situating them within global trends. It examines the colonial origins of formal architectural education, post-independence shifts towards indigenous idioms, and the standardisation brought about by the establishment of the Council of Architecture (COA) in 1972. Comparative studies with international curricula reveal differences in core subjects, studio-based learning, technology integration, and interdisciplinary approaches.

The review highlights the influence of emerging technologies—such as Artificial Intelligence (AI), Building Information Modelling (BIM), and sustainable design—on curriculum evolution, alongside the growing emphasis on smart city planning and ecological consciousness. Faculty and student perspectives underscore gaps between academic preparation and industry expectations, while policy frameworks like the National Education Policy (NEP) and COA standards shape reform directions.

Historical and contemporary scholarship—from Pătroc (2023) to Martyshova (2023)—illustrates the shift from unstructured apprenticeship models to standardised, student-centred, and competency-based education. Key trends include the rise of collaborative and adaptive learning spaces, integration of green and regenerative design, use of virtual and blended learning environments, and globalisation of standards. The literature underscores the need for continuous curricular renewal to align with sustainability imperatives, technological progress, and evolving socio-cultural demands in the built environment.

Chapter 3: Research Methodology

This study determined the curriculum's relevance to industry expectations and the global best practices through descriptive and analytical research methodologies. This study provides a holistic analysis of all components of architectural education, collating existing research on content, pedagogical innovations and industry standards to highlight the strengths and gaps of curricula around the world. The following sections provide a comprehensive account of the methodology, covering the research design, data collection methods, sampling strategies, and analytical approaches employed to ensure a robust and unbiased investigation.

This study adopts a mixed-methods approach, combining qualitative and quantitative techniques to critically assess the relevance, industry alignment, and global competitiveness of India's undergraduate architecture curriculum. Primary data was gathered through structured surveys and interviews with 500 students, 250 faculty members, and 160 industry professionals, supported by secondary analysis of academic literature, COA guidelines, NEP 2020 provisions, and international best practices. Stratified and purposive sampling ensured diversity across institution types, locations, and respondent categories.

The research design is exploratory—identifying gaps and opportunities—and descriptive—documenting the current state of architectural education. A pilot study involving 100 participants tested and refined the survey instruments, achieving high reliability (Cronbach's alpha 0.88–0.99 across all constructs). The final questionnaire examined curriculum–industry alignment, adaptability, practical training, technology adoption, and policy impacts. Data analysis employed both graphical representations (bar/pie charts, histograms) and inferential statistics, including One-Way ANOVA and Chi-Square tests, to explore relationships between variables and assess stakeholder perceptions. The findings aim to inform curriculum reform by highlighting strengths, weaknesses, and areas for modernization in line with technological advancements, sustainability imperatives, and interdisciplinary needs.

The study's scope is limited to undergraduate programs in India, with constraints including geographic coverage, potential respondent bias, unequal technology adoption across institutions, and reliance on self-reported data. Nonetheless, the methodology ensures a robust, evidence-based evaluation capable of guiding academic, policy, and industry stakeholders in enhancing architecture education's relevance to contemporary professional demands.

Chapter 4: Data Analysis

The chapter aims to analyze the qualitative and quantitative aspects of the current architecture curriculum in India, in context to its relevance in the present time. The insights were developed through stakeholder interviews, analysis of public curriculum content and field observations at various institutions. We use thematic maps to visualize major challenges and innovations in the curriculum and to report the themes which emerged from the qualitative data.

This chapter of the thesis presents a detailed account of all the results obtained after critical analysis of the collected data. The results are presented using suitable Tables, Charts, Maps and Pictures.

Five hypotheses were tested to assess the adequacy, adaptability, and relevance of India's undergraduate architecture curriculum. The first, on curriculum alignment with professional needs, was rejected through ANOVA results, revealing significant gaps between academic training and industry expectations. The second, on rigidity not hindering adaptability, was also rejected via Chi-Square tests, showing that structural inflexibility limits responsiveness to emerging trends and technologies. The third, on adequacy of practical skills training, was rejected as ANOVA confirmed insufficient integration of field-based, technology-driven experiences. The fourth, on challenges in adopting modern technologies, was similarly rejected, with evidence that both students and faculty face substantial barriers due to limited infrastructure, resources, and training. Finally, the fifth hypothesis, on NEP 2020 having no

significant influence, was rejected through ANOVA, confirming that NEP has a measurable impact in driving curricular restructuring toward flexibility, interdisciplinary approach, and technological integration. Collectively, the results underscore the urgent need for curriculum reform to enhance industry relevance, adaptability, and technological preparedness.

The qualitative review, based on stakeholder interviews, curriculum content analysis, and field observations, reveals persistent challenges in India's architecture education. Predominant issues include outdated, lecture-heavy pedagogy limiting creative design thinking, rigid curricula restricting electives and student autonomy, a significant digital gap in adopting professional software and workflows, weak industry linkages, and insufficient integration of sustainability and regional context. While global benchmarks are acknowledged, their adoption remains minimal. Thematic mapping of emerging practices shows encouraging but uneven innovations — interdisciplinary electives, design-build studios, community engagement, gradual integration of digital tools like BIM, flexible thesis formats, industry partnerships, and limited international exchanges. These practices remain sporadic, dependent on institutional leadership rather than systemic policy. Overall, the analysis underscores a dual reality: entrenched structural and pedagogical limitations alongside pockets of progressive reform. Scaling and standardising these innovations at a national level is essential to create a flexible, digitally literate, contextually sensitive, and globally aligned architecture curriculum.

Across the selected case studies, curriculum credits generally fall within CoA norms, though with some imbalances. While Professional Core subjects meet prescribed proportions, Building Sciences & Applied Engineering often exceed recommended limits but omit key components like Environmental Lab and Acoustics. Professional and Open Electives are underrepresented, with reduced student choice and neglect of critical topics such as green building, disaster management, and building performance. Professional Ability Enhancement and Skill Enhancement courses are inconsistently implemented, with notable gaps in areas like project management, BIM, entrepreneurship, and foreign languages. These trends reflect reduced curricular flexibility and insufficient focus on emerging professional competencies.

The comparative study of five leading architecture schools—MIT, Bartlett (UCL), TU Delft, ETH Zurich, and Tsinghua University—reveals both shared foundations and distinctive emphases in global architectural education. All programs cultivate core competencies in design, history, and building technology, yet diverge in technical integration, cultural responsiveness, and innovation strategies. Regional context strongly shapes each curriculum, with varying balances between tradition and innovation. The analysis highlights the potential of cross-institutional collaboration to develop adaptable, globally relevant frameworks for navigating the profession's evolving demands.

NEP 2020 advocates a flexible, multidisciplinary, and technology-enabled higher education system, implemented in complementary ways by AICTE and UGC. Common directives include dismantling disciplinary silos, adopting Choice-Based Credit Systems (CBCS), enabling Academic Bank of Credits (ABC) for mobility, integrating digital platforms like SWAYAM and Virtual Labs, and introducing multiple entry–exit pathways for certificates, diplomas, and degrees. AICTE's focus lies in modernizing technical curricula with emerging technologies, Outcome-Based Education (OBE), faculty training, mandatory internships, and fostering an innovation–startup ecosystem, alongside provisions for minors and honours specialisations. UGC emphasizes flexible degree frameworks (CCFUP), skill-based micro-credentials, environmental literacy, internationalization through dual degrees and foreign university collaborations, and graded institutional autonomy. The coordinated yet distinct approaches—AICTE driving technological readiness and industry integration, UGC promoting academic breadth and global engagement—together aim to create a learner-centric, future-ready higher education landscape.

Chapter 5: Findings, Conclusions and Recommendations

The study reveals that India's undergraduate architecture curriculum, while grounded in a strong theoretical base, is misaligned with the evolving demands of the profession. Key gaps include outdated pedagogy, rigid structures limiting adaptability, insufficient integration of modern digital tools, weak industry-academia linkages, and inadequate emphasis on sustainability and regional context. Stakeholder feedback consistently points to the need for practice-oriented, technology-enabled, and contextually relevant learning. Quantitative testing confirmed significant misalignment with professional needs, structural inflexibility, inadequate practical skill training, and the transformative influence of NEP 2020 in pushing towards flexibility, inter disciplinarity, and technological integration. Emerging innovations — interdisciplinary electives, design-build studios, community engagement, and industry partnerships — demonstrate potential but lack standardisation. The overall inference is that systemic, policy-driven reforms are essential to scale best practices, bridge academia-industry gaps, and ensure graduates are prepared for contemporary and future architectural challenges.

The proposals focus on transforming architecture programs to meet emerging demands by providing series of recommendations to Academic Institutions and Industry.

The proposed thematic curriculum emerges at a time when academia, industry, and policymakers are actively engaging in dialogues to integrate the National Education Policy (NEP) 2020 into architecture education. Consistent with NEP's emphasis on interdisciplinary flexibility, the proposed curriculum incorporates the option for students to pursue a "Minor" or "Honours with Specialisation" in focused subject areas, requiring an

additional 18 credits. The credit framework follows NEP's norm of ~20 credits per semester (40 per year, ~200 total over five years). The resulting thematic curriculum blends NEP's vision for flexibility and specialisation with CoA's established professional structure, positioning the B.Arch. programme for greater adaptability, interdisciplinary engagement, and global relevance.

Chapter 6: Scope for further research

The present research aims to evaluate and classify the contemporary architecture curricula in India and explore models aligned with NEP 2020. However, the subject offers vast potential for extended inquiry beyond the PhD. The chapter present future directions for research and implementation:

Region-specific studies, comparisons between public and private institutions, and analysis of postgraduate and specialised programs can yield richer insights. Longitudinal tracking of graduates' careers will clarify the curriculum's long-term impact, while investigations into integrating emerging technologies (AI, BIM, VR/AR), sustainability, and vernacular design will ensure future readiness. Policy-focused research can support national guidelines, accreditation reforms, and benchmarking tools, complemented by studies on interdisciplinary linkages, inclusive education, entrepreneurship, and lifelong learning models.

Such work will bridge the gap between academic training and professional practice, enabling architecture education to remain relevant, innovative, and aligned with global and national priorities.

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