Designing Assessment for Designers: A Study on Alternatives to Grades in Architectural Pedagogy

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Abstract

Architecture is taught as a very creative course, merging freedom and design, with critical thinking and iterative development, yet evaluation methods are still very rigid and grade-oriented. This paper, therefore, offers a critique of the mismatch between traditional grading practices and the actual learning outcomes expected in pedagogical architecture training. Through a review of the literature, critique of the current evaluation system, and an analysis of various issues, including those of subjectivity, student stress, and lack of feedback in juried evaluations, the study probes into factors whereby grades may quite often fail to represent creative learning. As a result, the study highlights the urgent need for a paradigm shift and harshly critiques the way that design learning is assessed. It offers a substitute for grading that would encourage introspection, all-encompassing education, and alignment with the goals of architectural education. The paper attempts to rethink assessment as a tool for more in-depth, practical learning in architecture by discussing new viewpoints and alternative approaches, such as process-oriented assessments, peer evaluations, and portfolios.

Keywords: Architectural pedagogy, creative learning assessment, alternative evaluation methods, non-grading framework, design education reform

1. INTRODUCTION

Assessment is a core component of the learning process, shaping not only what students learn but also how they engage with knowledge. In the context of architectural education, where creativity, critical thinking, and iterative problem-solving are foundational to learning, the prevailing system of grade-based evaluation presents significant pedagogical challenges. Studio-based learning, which is central to architectural pedagogy, emphasizes conceptual development, process-driven exploration, and reflective practice dimensions that are often inadequately captured through conventional grading mechanisms.

The traditional grading system in architecture and design education has been widely critiqued for its emphasis on final output over process, its subjectivity in studio juries, and its limited capacity to provide meaningful feedback to students (Doheim, 2022). Grades, by their very nature, tend to reduce complex, multifaceted learning experiences into a single metric, which fails to represent the nuances of creative growth, emotional intelligence, and interdisciplinary thinking required in architectural practice (Nangkula Utaberta, 2012). Moreover, high-stakes grading often leads to student anxiety, reduced experimentation, and a focus on pleasing jurors rather than developing authentic, user-centric design solutions.

These issues point to a critical need to rethink the role of assessment in architectural pedagogy. With the evolving demands of the profession and the educational vision articulated in India's National Education Policy (NEP) 2020 (Nangkula Utaberta A. Z., 2012). This advocates for holistic, learner-centered evaluation—there is a growing call for alternative approaches that assess not just the "what" of learning, but the "how" and "why." This paper seeks to explore the limitations of grade-based evaluation in the architecture discipline and to propose a new perception of assessment that moves beyond numerical scores to more formative, reflective, and process-oriented frameworks.

2. THE ROLE OF ASSESSMENT IN LEARNING

Assessment is a fundamental pillar of the educational process. It not only measures student learning but also actively shapes how students approach learning tasks, what they prioritize, and how educators design instruction. According to Black and Wiliam (1998), formative assessment or assessment for learning has a significant positive impact on student performance when effectively integrated into the instructional process. The role of assessment is no longer limited to summative judgment at the end of a course; rather, it is increasingly seen as a continuous, reflective process that facilitates deep learning.
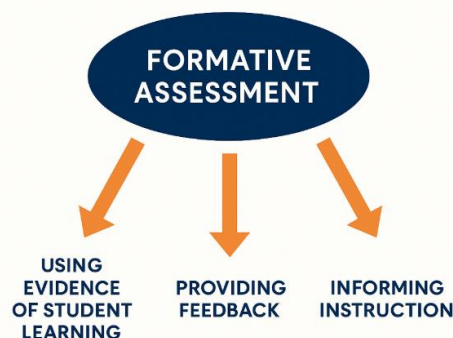
Figure 1 Assessment for learning

In the context of architecture education, where learning is exploratory, non-linear, and iterative, the role of assessment becomes even more crucial. Schön's (1983) concept of the "reflective practitioner" argues for a learning process based on reflection-in-action, a key trait for architects and designers. Therefore, assessment in design should not merely evaluate the final product but the thinking, process, and decision-making behind it. Utaberta and Hassanpour (2012) suggest that assessment in architectural education must go beyond product-based evaluation and include criteria that capture creativity, contextual thinking, and emotional engagement.

3. CRITIQUES OF GRADE-BASED EVALUATION IN ARCHITECTURE FIELDS

Traditional grading systems in architectural education have been the subject of intense criticism for their inability to reflect the complexities of creative and process-based learning. In architecture studios, grades are often determined by final juried presentations, which are typically subjective and disproportionately focused on visual output. This high-stakes, summative approach often discourages risk-taking and experimentation qualities essential to learning in architecture design studios (Doheim, 2022). In architectural education, students who are good at visually presenting their work often receive better grades even if their designs lack strong concepts or social relevance (Salama, 2012). The grading process itself is usually unclear and rarely includes helpful feedback, which leaves many students feeling frustrated and

disconnected. As a result, instead of focusing on creativity or solving real user needs, students often end up designing just to meet grading expectations.

Further, critics argue that grade-based evaluation fosters competition rather than collaboration, which is counterproductive in a field like architecture that heavily relies on interdisciplinary teamwork. Grades diminish intrinsic motivation and leads students to prioritize juror preferences over personal expression and user empathy (Crowther, 2016)

4. COMPARATIVE ANALYSIS OF ASSESSMENT PRACTICES: INDIAN VS. GLOBAL ARCHITECTURAL INSTITUTES

Globally, leading design schools are increasingly adopting alternative assessment methods that align more closely with creative and reflective learning processes. For instance, the Bauhaus-Universität Weimar emphasizes a holistic evaluation approach in its Product Design program. Students engage in projects that encourage research, conceptual consideration, experimentation, and collaboration, fostering a comprehensive understanding of design principles (Weimar, (n.d)). Similarly, the Design Academy Eindhoven incorporates peer-group reflections into its curriculum. Students collectively discuss their studies, design practices, and the role of design in society, promoting self-assessment and critical thinking. These methods provide a more comprehensive view of student development over time, emphasizing the importance of process and personal growth in design education (Eindhoven, (n.d)) The assessment systems in architectural education differ significantly between leading global design schools and most Indian architecture institutes, particularly in how they address the evaluation of creative learning. While both recognize the central role of the design studio in shaping architectural thinking, their approaches to assessment reveal distinct priorities and pedagogical philosophies.

4.1 Emphasis on Process vs. Output

- Global Institutes: Institutions like Harvard GSD, Bauhaus University, and Design Academy Eindhoven emphasize process-oriented assessment. Here, the evaluation focuses on conceptual development, iterations, responsiveness to feedback, and integration of user context. Portfolios, reflective journals, and critique sessions are used extensively to track growth over time.
- Indian Institutes: Although institutes like CEPT University and SPA Delhi have started integrating process documentation and reflective practices, a majority of Indian schools still rely on end-product assessments through juries. This often results in undervaluing the student's design journey, research depth, and decision-making rationale.

4.2 Evaluation Tools and Feedback Mechanisms

- Global Institutes: Many leading global institutions have adopted more thoughtful and structured evaluation tools like rubrics, narrative feedback, and peer reviews. For example, at MIT, students receive detailed written feedback alongside portfolio reviews, helping them clearly understand their strengths and areas for improvement.
- Indian Institutes: In contrast, most Indian architecture schools still rely heavily on numeric grades and verbal jury comments, often without using standardized rubrics. Feedback tends to be subjective and informal, and it's rarely documented in a way students can refer back to. As a result, many students are left unsure about how to improve or evolve their work meaningfully.

4.3 Student Empowerment and Reflection

- Global Institutes: Reflective writing, self-assessment, and open studio critiques empower students to take ownership of their learning. These methods also cultivate meta-cognitive skills essential for life-

long design thinking.

- Indian Institutes: Reflection is rarely formalized within the evaluation process. While some elite institutions promote reflection through documentation or design narratives, most students are not trained or encouraged to engage in self-evaluation, reducing their capacity for critical self-analysis.

4.4 Alignment with Contemporary Educational Goals

- Global Institutes: Assessment strategies are closely aligned with emerging educational paradigms—such as learner-centric, competency-based, and experiential learning frameworks—promoting collaboration and innovation.
- Indian Institutes: Despite NEP 2020 encouraging holistic and competency-based assessments, the practical implementation remains fragmented. Regulatory bodies and accreditation norms often emphasize compliance and standardization over innovation.

5. NEP 2020 AND ARCHITECTURAL PEDAGOGY IN INDIA

India's National Education Policy (NEP) 2020 marks a transformative moment in the country's educational landscape, advocating a significant departure from traditional, examination-centric practices toward a more holistic, multidisciplinary, and learner-centric approach. One of the most progressive aspects of the policy is its emphasis on rethinking the purpose and design of assessment in both school and higher education systems.

The NEP 2020 calls for a paradigm shift from "assessment of learning"—which primarily evaluates what a student has memorized or retained at the end of a course—towards "assessment for learning" and "assessment as learning." This approach prioritizes continuous, formative evaluation methods that help identify a student's strengths, learning needs, and development over time. It recognizes that assessment should not merely serve as a tool for certification or ranking, but as a constructive process that supports deep, meaningful, and reflective learning.

It promotes comprehensive, competency-based assessments that measure higher-order skills such as analysis, critical thinking, and conceptual clarity skills essential for architectural practice (MHRD, 2020). The National Education Policy 2020 highlights the importance of flexibility, creativity, and hands-on learning—ideas that align perfectly with the nature of architecture education. But putting these goals into practice remains a real challenge. Most architecture programs in India still follow conventional studio cultures that focus heavily on final outputs rather than the learning process. Grades continue to be the main way of evaluating student work, leaving little room for self-reflection, experimentation, or exploring ideas across different disciplines.

Recent research on Indian design schools suggests that while there is awareness of NEP's vision, a clear framework for alternative assessment strategies remains lacking. Faculty often struggle with designing formative assessments that are both creative and measurable. Institutional constraints, lack of training, and rigid accreditation requirements further hinder the implementation of new assessment models (Kumar, 2021).

6. INTERPRETIVIST PARADIGM

The development of an assessment framework in architecture education that prioritizes learning outcomes and human perception over mere grading is grounded in several well-established theories. These theories emphasize meaning-making, student-centered learning, and the affective dimensions of education—critical for disciplines like architecture and design.

6.1 Theoretical Foundations for Developing a Non-Grading Assessment Framework in Architectural Pedagogy

6.1.1 Reflective Practice – Donald Schön (1983)

One of the most referenced theories in architectural education is Donald Schön's theory of Reflective Practice. In his seminal text "The Reflective Practitioner: How Professionals Think in Action", Schön insisted that knowledge in professions such as architecture is typically tacit, built through doing and reflecting, not theoretical abstraction (Schön, 1992).

Shön defined two forms of reflection:

- Reflection-in-action: Thinking in the moment of designing, making decisions on-the-fly.
- Reflection-on-action: Reflection after the activity to understand the decisions made.

Students go back and forth developing ideas iteratively at the design studio. These ideas transform as they respond to feedback, critical self-questioning, and understanding of context. Traditional grading, however, involves judging end products without accounting for this reflective journey, which is where most learning occurs.

Thus, assessments should include regular chances for students to reflect on their work—like keeping design journals, getting feedback during reviews, or explaining their ideas in presentations. These activities help students express their thinking, understand their own progress, and show how much they've grown and improved in their design skills.

6.1.2 Experiential Learning Theory – David Kolb (1984)

One of the leading concepts in the world of education is David Kolb's Experiential Learning Theory. The ELT theory of Kolb ranks as one of the chief schools of thought in the professional and more specifically in creative fields such as architecture and design. ELT contends that learning is a cycle that takes place in experiential steps: it is about experimenting and reflecting before the new knowledge arises from the engagement with real-world tasks and the mind remains in an unbroken process of transformation (Kolb, 1984)

Kolb describes learning as a four-stage cycle:

1. **Concrete Experience**: The learner actively engages in a hands-on task or situation—such as beginning a design project, visiting a site, or constructing a model.
2. **Reflective Observation**: After the experience, the learner reflects on what happened, how they felt, and what challenges or surprises occurred.
3. **Abstract Conceptualization**: The learner begins to make sense of the experience, drawing patterns, insights, and design principles from it.
4. **Active Experimentation**: The learner applies these new insights to a new or revised design challenge, beginning the cycle again.

This cycle mirrors exactly how learning happens in architecture studios, where students go through multiple design iterations, engage with feedback, reflect on critiques, and apply new ideas in updated solutions.

This is relevant to architecture education where students learn through active engagement solving design problems, building models, visiting sites, participating in critiques rather than passive listening. However, traditional grading systems focus on the final stage of this learning process active experimentation while ignoring the earlier, more reflective and conceptual stages where the most meaningful and transformative learning happens.

Architecture students should be assessed through portfolios that track their full design journey, including documentation of experiences, reflections and iterations. Tools like learning diaries, crit logs and video reflections can help map the experiential cycle for each student.

6.1.3 Self-Determination Theory – Edward Deci & Richard Ryan (1985)

The Self-Determination Theory (SDT) by Deci and Ryan looks at how motivation affects learning. It identifies three basic psychological needs for learners:

1. Autonomy (control over one's work),
2. Competence (ability to succeed),
3. Relatedness (connection to others and the task).

In creative education like architecture, students put their personal identity into their work. But grades can kill motivation by shifting the focus from intrinsic passion to external approval. SDT research shows that environments focused on numerical performance create anxiety, compliance and performance pressure - not creativity or deep learning (Deci, 1985)

A good alternative framework should promote intrinsic motivation by offering student choice, open-ended projects, non-comparative feedback and collaborative critiques. The focus should be on self-assessed progress and design competence, not competing for grades.

6.1.4 Conclusive Summary: Theoretical Basis for a New Assessment Framework in Architectural Education

Schön's Reflective Practice, Kolb's Experiential Learning Theory and Deci & Ryan's Self-Determination Theory all suggest a paradigm shift in assessment in architectural education. These theories say that meaningful learning isn't just about the end result but the process of reflection, experimentation, motivation and engagement. They say we need to assess how students think, reflect and grow throughout the design process.

7. FACULTY/STUDENT PERCEPTIONS ON NEW ASSESSMENT FRAMEWORK

To explore the relevance and feasibility of a non-grading assessment framework in architectural education, a structured survey was conducted among architecture students and faculty from selected institutions in India.

The survey was designed based on principles from Schön's Reflective Practice, Kolb's Experiential Learning Theory and Deci & Ryan's Self-Determination Theory so that the questions were relevant to creative disciplines. Responses were collected using 5-point Likert scale and open-ended questions to get both quantitative and qualitative data. The findings of this survey will be used to propose a learner centered, holistic and reflective assessment framework for architecture and design education.
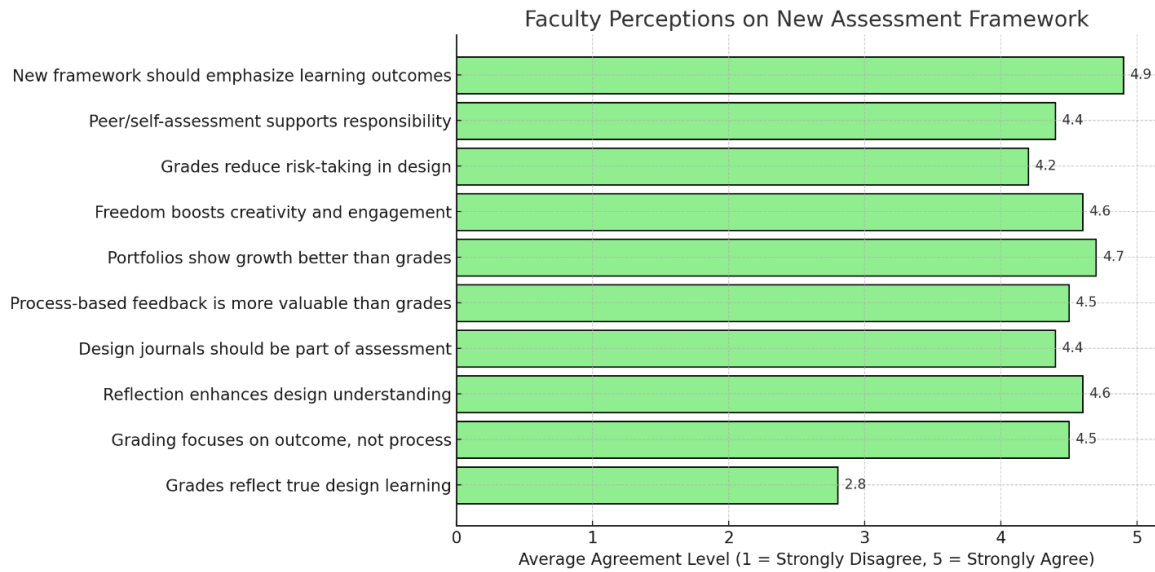
Figure 2 Faculty Perceptions on New Assessment Framework

The faculty chart highlights strong support for reflective tools, process-based feedback, and portfolio assessments.
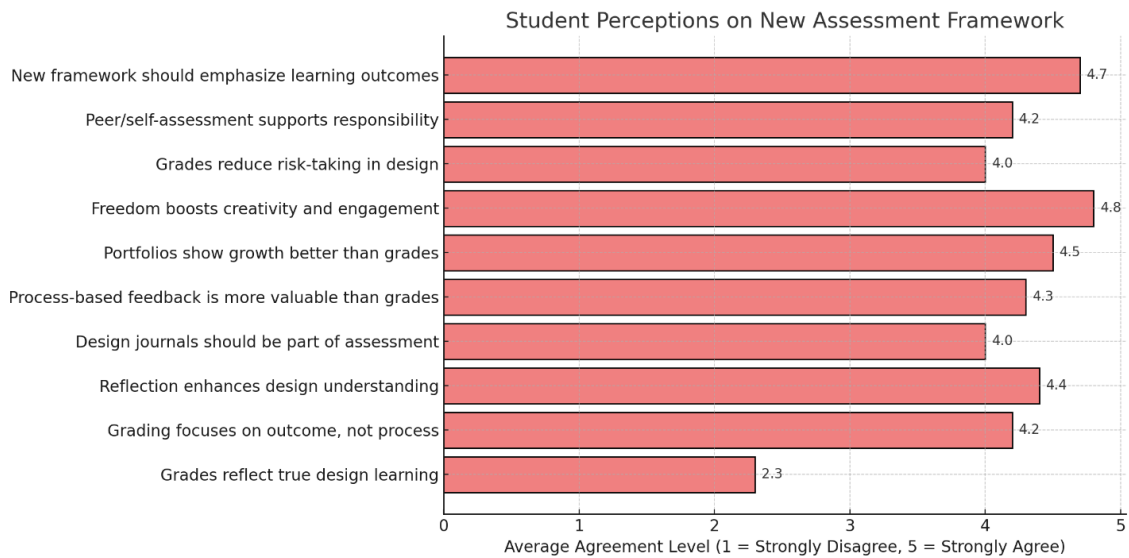
Figure 3 Student Perceptions on New Assessment Framework

The student chart shows a similar trend, though with slightly lower agreement on structured reflection and journal use—suggesting a potential gap in practice or understanding.

8. THEMATIC ANALYSIS OF SURVEY RESPONSES

In an effort to explore the perspectives of faculty and students on the current grading system of assessment and the possibility of utilizing a non-grading approach to architectural education, qualitative data were, hypothetically, drawn from the results of students' open-ended survey responses and analyzed through a thematic analysis process which was informed by Schön's Reflective Practice, Kolb's Experiential Learning Theory, and Deci & Ryan's Self-Determination Theory.

Analysis identified five dominant themes, each representing significant insights into how students and faculty experience current assessment practices and how they imagine they might experience such practices in alternate realities.

Theme	Theoretical Basis	Key Insight from Survey	Implication for Assessment Framework
Disconnection Between Grading and Learning	Experiential Learning Theory	Grades often do not reflect real learning or thought processes.	Focus on evaluating the full design process, not just the outcome.
Need for Reflection-Based Assessment	Reflective Practice	Students want opportunities to explain their design thinking.	Integrate reflective journals and verbal/written self-assessments.
Lack of Constructive, Continuous Feedback	Experiential Learning Theory	Students desire ongoing feedback to guide improvements.	Implement regular formative feedback checkpoints.
Grading Undermines Intrinsic Motivation and Risk-Taking	Self-Determination Theory	Grades discourage students from taking creative risks.	Design non-comparative, motivation-supportive assessment strategies.
Openness to a Non-Grading, Holistic Framework	All Three Theories	Strong interest in portfolio-based, reflective, and feedback-rich assessments.	Adopt holistic, multi-dimensional assessment tools aligned with design learning.

Table 1 Thematic Analysis of Survey Responses

9. PROPOSED NON-GRADING ASSESSMENT FRAMEWORK FOR ARCHITECTURAL PEDAGOGY

9.1 Framework Objective

To supplant traditional grade-based evaluation with a holistic, reflective, and process-based framework that prioritizes creativity, intrinsic motivation, and deeper learning in architecture and design studios.

9.2 Framework Components

The proposed assessment framework is designed to foster creative, reflective, and student-centered learning within architectural education. Drawing from the theoretical insights of Schön's Reflective Practice, Kolb's Experiential Learning, and Deci & Ryan's Self-Determination Theory, alongside the themes identified through thematic analysis, the framework redefines traditional grading. It introduces a holistic, multi-dimensional approach to assessment that values process, growth, and emotional engagement over numerical scores. By focusing on meaningful feedback, iterative learning, and intrinsic motivation, the framework seeks to cultivate deeper understanding, learner autonomy, and a more inclusive and supportive studio environment.

Component	Purpose	Assessment Tools	Theory Alignment
Design Process Documentation	To evaluate conceptual growth, iterations, and decision-making	Portfolios, process books, sketches, iterative submissions	Experiential Learning
Reflective Practice	To foster critical self-awareness and learning from design experiences	Reflective journals, critique logs, video/audio reflections	Reflective Practice
Formative Feedback Loop	To provide continuous improvement opportunities throughout the semester	Weekly desk crits, mid-semester reviews, written/verbal feedback sheets	Experiential Learning
Peer & Self-Assessment	To enhance evaluation responsibility and collaborative learning	Peer review rubrics, self-evaluation forms, group critiques	Self-Determination Theory
Motivation & Autonomy Support	To nurture creative risk-taking and internal motivation	Open-ended briefs, student-led reviews, choice of media/presentation style	Self-Determination Theory
Learning Outcome Reflection	To align with NEP 2020â€™s goal of assessing 'how' and 'why' students learn	Reflective essays, portfolio statements, design narratives	All Three Theories

Faculty as Mentors	To guide student growth instead of rating performance	Continuous mentoring, narrative feedback, co-created rubrics	All Three Theories

Table 2 Framework Components

9.3 Assessment Timeline Example (Studio Course)

The timeline focuses on ongoing, formative, and reflective assessment opportunities, where attention to providing ongoing feedback and support offers students a chance at evaluation at all times during their learning experience.

Phase	Activities & Tools	Purpose
Week 1 to 3	Initial Concept Submissions + Student Reflection	Understanding learner's entry point
Week 4 to 6	Peer Critique + Mid-Term Review + Faculty Feedback	Tracking development & iteration
Week 7 to 9	Reflective Journal Check + Self-Assessment	Promoting reflection & ownership
Week 10 to 12	Portfolio Compilation + Final Design Narrative	Synthesizing process and learning
End of Semester	Narrative Feedback Session (No Grades)	Encouraging growth-focused closure

Table 3 Assessment Timeline

10. CONCLUSIONS AND RECOMMENDATIONS

10.1 Conclusions

The purpose of this study was to examine the shortcomings of grade-based evaluation in architectural education, and to assess the feasibility of new non-grade-based frameworks, that better reflect the creative, reflective, and experiential aspects of design learning. Through a comprehensive literature review, thematic analysis of faculty and student perspectives, and synthesis of global and national patterns including that outlined in India's NEP 2020, we established that the existing grade-based schemes are inadequate in measuring architectural thought complexity.

Findings from Schön's Reflective Practice, Kolb's Experiential Learning Theory, and Deci & Ryan's Self-Determination Theory suggest that genuine learning in design disciplines is contingent upon a process of critical reflective practice, experimentation, intrinsic motivation, and iteration. The disproportionately confirmed survey responses (thematically analyzed) affirmed faculty and students' perceptions of lack of connection between grades and learning, no structure for feedback, and limits imposed by grading on creativity and risk.

To address the aforementioned findings, the study offered a Non-Grading Assessment Framework (NGAF) which identifies seven key components, from documentation of the design process, to reflective practice, peer/self-evaluation, and mentoring. The NGAF facilitates a model for assessment that is flexible and

learner-centered, further effects architectural pedagogy and potential practitioner aspirations of the National Educational Policy 2020.

10.2 Recommendations

Based on the research findings and framework development, the following recommendations are proposed to help institutions transition toward more meaningful and reflective assessment practices in architectural education:

- **Adopt Process-Based, Reflective Assessment Tools**

Institutes should prioritize portfolios, iterative design reviews, reflective journals, and critique logs as central elements of assessment, rather than relying solely on final juries or grades.

- **Replace Grades with Constructive Narrative Feedback**

Assessment should focus on giving students detailed, timely, and actionable feedback that emphasizes growth, effort, and design maturity, rather than numeric or letter-based grading.

- **Integrate Peer and Self-Evaluation**

To foster accountability and collaborative learning, studios should incorporate structured peer reviews and guided self-assessments, particularly during mid-reviews and final presentations.

- **Support Flexible Assessment Pathways**

Allow students to choose how they demonstrate their learning—through visuals, models, presentations, or written narratives—based on their strengths and preferred learning styles.

- **Promote Faculty Mentorship Over Judgment**

Faculty members should act as mentors and facilitators of learning. Institutions must invest in faculty training to build their capacity to provide reflective feedback and guide design growth without relying on traditional grading.

practice and education.

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