

Toward Ethical AI Integration in Indonesian Design Education: Lessons from Global Practices

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Abstract: The rapid advancement of Generative AI is reshaping higher education and presents both opportunities and risks for design education, which depends on creativity, originality, and practice-based learning. This study maps and analyses institutional policies and ethical guidelines on AI use in design programmes at leading universities to answer: (1) How are AI policies applied in design education? (2) What institutional typologies—permissive, conditional, restrictive—exist? and (3) How can global practices inform Indonesian policy? Using mixed-methods document analysis guided by a 5W1H framework and a policy-typology classification, we combined systematic text chunking with an iterative, human-in-the-loop ChatGPT workflow for seed-code generation, batch coding, and preliminary synthesis; all model outputs were archived and human-validated (see Appendix A).

Preliminary synthesis of campus summaries identifies four recurrent themes—ethics/academic integrity, implementation controls (approved tools, vendor security, data restrictions), pedagogy (AI literacy, assessment redesign, studio guidance), and governance (disclosure, sanctions). Institutions fall along a continuum: design/art schools tend toward permissive, experimentation-friendly approaches with faculty discretion and disclosure requirements, while research-intensive institutions favor restrictive, legal/contractual safeguards for research and publication.

For Indonesia, we recommend a three-tier policy architecture: (i) permissive studio experimentation with mandatory process documentation; (ii) conditional rules and standardized disclosure for assessed work; and (iii) restrictive controls for research/publication and high-risk data—supported by institutional tool provisioning, equity measures, and staff training. Limitations: document-based analysis and the non-deterministic nature of LLM assistance; human review underpins reported findings.

Keywords: AI in education; ethical policy; design education; policy analysis; Generative AI.

INTRODUCTION

Generative AI (text and image generation, code assistance, and multimodal systems) is rapidly reshaping creative practices and pedagogies in higher education (Florida & Cows, 2019). Design education—traditionally centered on studio practice, process documentation, and originality—faces new tensions as students and staff incorporate AI into ideation, visualization, and drafting (Davis, 2017). These possibilities come paired with ethical and institutional questions: Who owns AI-mediated work? How should institutions protect academic integrity and local cultural sources? What governance and pedagogical strategies best support creativity without undermining learning outcomes?

Existing policy research on AI in higher education tends to be general and fragmented; comparatively few studies systematically analyze how institutions adapt AI governance specifically for design programs. Our study maps and analyzes institutional policies across leading design and art schools to build a typology of institutional approaches (permissive, conditional, restrictive) and to derive recommendations for Indonesian design programmes.

Literature Review

The literature on AI in education emphasizes three domains relevant to design programs: (a) pedagogical implications (AI as tool vs. crutch) (Patton, 2015); (b) academic integrity and authorship challenges posed by generative systems (Holmes, Bialik, & Fadel, 2019); and (c) governance approaches—legal, contractual and distributive—adopted by universities (Luckin et. al, 2016), (OpenAI, 2025). Prior comparative work has primarily focused on STEM and social science contexts; art & design contexts—where outputs are visual, practice-led, and publicly exhibited—require tailored policy attention [7].

Frameworks for AI governance in universities frequently combine regulatory measures (disclosure, sanctions), distributive measures (training, licensed tools), and contractual safeguards (vendor agreements and data protection). Design programs often wrestle with an internal tension between fostering experimentation and preventing misuse, a duality that the present study explores across institutional typologies and regional contexts.

Research Aims

This study examines the application of AI policies, with particular attention to Generative AI, in design programmes worldwide. It seeks to identify the typologies of institutional approaches to AI governance—whether permissive, conditional, or restrictive—and to explore how these global practices can inform the development of contextually appropriate AI policies for Indonesian design institutions.

METHODS

Research design

Mixed-methods document analysis. We collect institutional policy documents (publicly available guidelines, faculty handbooks, research integrity policies, and discipline-specific guidance) from 20 universities with recognized design/art programmes. Selection uses QS rankings and institutional visibility in design education.

Data Collection

Primary data are official institutional documents including but not limited to: AI/generative-AI guidelines, academic integrity codes, faculty handbooks, and vendor procurement policies. Sources are identified via institutional websites and direct contact where documents are not publicly available.

Coding & Analysis

Instead of using commercial qualitative software, we employed an iterative, human-in-the-loop ChatGPT workflow to develop the codebook, apply codes, and synthesize themes. The workflow consisted of the following steps:

All documents were converted to plain text and divided into 300–800 word chunks to fit ChatGPT's prompt window while preserving context. Seed coding was conducted on a 10% sample using the 5W1H framework, with emphasis on the Who aspect, to generate initial

candidate codes. Researchers then consolidated AI-suggested and human-generated codes into a draft codebook with definitions, criteria, and examples, refining it iteratively through ChatGPT-assisted clarification. The full dataset was batch-coded using this codebook, with ChatGPT assigning codes, quotes, and structured summaries; all outputs were archived verbatim. To ensure reliability, two researchers independently reviewed a 20% sample of coded chunks, reconciling discrepancies through consensus and updating the codebook as needed. The validated corpus was then synthesized into higher-level themes and comparative tables (e.g., campus × typology), with ChatGPT outputs used only as analytic aids and final interpretations authored by the research team. At each stage, raw responses, codebook versions, validation notes, and synthesis tables were archived to maintain transparency and reproducibility.

This ChatGPT-based workflow was chosen over conventional qualitative software (e.g., NVivo, Atlas.ti) to test an accessible, flexible, and transparent approach that aligns with the study's experimental focus on AI-assisted analysis. However, as ChatGPT is non-deterministic and may generate inconsistent outputs, systematic archiving and human validation were essential safeguards to ensure rigor.

Comparative synthesis & triangulation

Quantitative counts (e.g., frequency of disclosure requirement, presence of licensed institutional tools) and qualitative syntheses are merged to construct cross-institutional typologies. We triangulate findings with available national guidance (e.g., Indonesian higher-education recommendations) to derive contextualized policy recommendations.

AI assistance and verification

We used OpenAI's ChatGPT (model/version: please insert exact model name/version used; interaction dates: insert dates) as an analytic assistant at multiple stages: seed-code generation, batch coding, and preliminary thematic synthesis. The specific roles of the model were to (a) suggest candidate codes from sample text, (b) assign provisional codes to document chunks according to the consolidated codebook, and (c) draft comparative syntheses and summary tables to guide human interpretation.

To ensure methodological rigor and accountability, we applied a structured verification process throughout the analysis. Every ChatGPT suggestion that contributed to the findings was subject to human-in-the-loop validation, with the researcher independently reviewing, revising, or rejecting model-assigned codes during data collection and coding. When recurrent issues emerged, such as ambiguous code assignments or inconsistent labeling, prompts and code definitions were refined and reapplied to the relevant text. The final synthesis was also interpreted and authored by the researcher, with ChatGPT outputs serving only as analytic aids rather than definitive results.

All ChatGPT interactions, including prompts and raw responses, were archived in Appendix A to create an auditable record, since model outputs cannot be exactly reproduced by third parties. Authors also flagged and corrected hallucinated or inaccurate statements, ensuring that no content was accepted without corroboration against the original institutional documents. Ultimately, all analytic decisions, thematic interpretations, and conclusions were the responsibility of the research team, with ChatGPT serving only as a facilitative tool rather than an author. Recognizing the inherent limitations and biases of large language models, these

validation steps were essential to safeguard academic integrity and maintain reliability in the coding and analysis process.

FINDINGS AND DISCUSSION

A. Findings

Common patterns

Primary stakeholders: Students, faculty/staff, researchers/authors, and third-party vendors are universally identified as target groups for policy measures.

Shared themes: Ethics (academic integrity, authorship), implementation (approved tools, vendor security), pedagogy (AI literacy, assessment redesign), and governance (disclosure, sanctions) recur across institutions.

Policy typologies: Institutions tend to reside on a continuum—permissive (creative experimentation encouraged with guidance), conditional (allowed with disclosure and course-level rules), and restrictive (prohibitions for assessments, strict research/publication rules).

Design programs vs research-intensive institutions

Design/art schools (e.g., RCA, UAL, Parsons, RISD, Pratt) exhibit a bias toward creative experimentation, offering distributive supports (institutional tools, studio integration) and granting greater course-level autonomy while still requiring disclosure and integrity safeguards.

Research/technical institutions (e.g., MIT, Oxford, Stanford, Politecnico di Milano) emphasize regulatory/contractual safeguards: strict authorship rules, vendor security requirements, and explicit prohibitions on uploading sensitive or unpublished manuscripts to public LLMs.

Indonesia-specific observations

National-level guidance (e.g., ministry recommendations, Kemendikbudristek directives) encourages both ethical guardrails and capacity-building for AI literacy. For Indonesian design programmes, equity concerns (internet access, device availability) and cultural-provenance issues (use of local wisdom and materials) require policies that balance studio experimentation with clear provenance and IP rules.

B. Discussion

The early synthesis supports a hypothesis: institutions with prominent design/arts programmes lean toward permissive, pedagogy-oriented approaches that prioritize creative exploration, whereas research-intensive institutions adopt more restrictive, legally framed governance approaches. This divergence suggests that policy design should be contextual—rather than applying a single, campus-wide rule, universities may adopt multi-layered approaches that differentiate between studio practice, assessed outputs, and public dissemination.

For Indonesia, this implies a hybrid policy architecture: (a) enabling safe experimentation in studio contexts with clear process documentation (prompts, versions, provenance), (b) stricter research/publishing controls that align with publishers' authorship expectations, and (c) equity-focused provisions (institutional licensing; low-bandwidth alternatives) to avoid disadvantaging students with limited resources.

c. Limitations

The manuscript is based on document analysis; implementation practices (how policies are enforced in classrooms and studios) require follow-up interviews and case studies. AI-

assisted drafting was used for initial synthesis and coding support; human validation was applied for all analytic claims. The exact AI prompts and outputs are documented in Appendix A for transparency. Several institutions lacked publicly available policies in the initial dataset; expansion of sample and direct institutional contacts will reduce selection bias.

CONCLUSION & SUGGESTIONS

We propose a set of recommendations for design programmes, particularly within the Indonesian context.

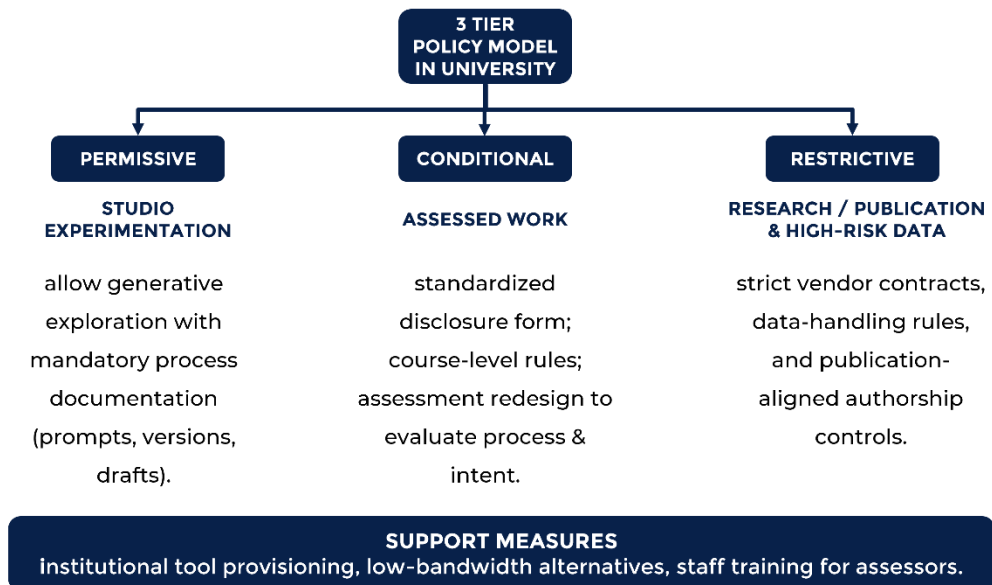


Figure 1. Three Tier AI Policy Model Recommendation in University

First, institutions could adopt a three-tier policy model: permissive studio experimentation with process documentation, conditional rules for assessed work that require disclosure, and restrictive measures for research and publication where disclosure and vendor compliance are mandatory. To support consistency, student submissions should include a standardized disclosure form indicating the tools used, prompts (or a summary of them), and the extent of AI involvement. Institutions should also provide curated or officially sanctioned tools to reduce inequities in access and mitigate risks of data leakage. In addition, supervisors and assessors need training to effectively evaluate AI-assisted projects while ensuring that intended learning outcomes are achieved. Finally, ethical guidelines should be localized to account for cultural provenance, particularly in projects drawing on community artifacts or local wisdom. Together, these measures aim to balance creative freedom with academic integrity and legal compliance, offering a practical pathway for Indonesian design institutions to develop contextually relevant AI governance.

ACKNOWLEDGEMENTS

The authors gratefully acknowledge the institutional support of Institut Teknologi Sumatera and the contributions of research assistants participating in the document collection and coding stages. Parts of the preliminary document screening, thematic coding suggestions, and early synthesis drafts were assisted by a large language model (ChatGPT, OpenAI, 2025).

All AI outputs used in the analysis were verified and edited by the authors, responsibility for the final manuscript and conclusions rests with the human authors.

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