



InJAERE: Indonesian Journal of Arts Education Research

InJAERE

Journal homepage: <https://ejournal.upi.edu/index.php/ijaer>

Curriculum Integration: Cross-Cultural Innovation Path of Batik and Academic Printmaking

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ABSTRACT

This study explores the integration of cross-cultural art education and curriculum reform by embedding Indonesian Batik traditions into printmaking pedagogy. Positioned within the dual contexts of global cultural integration and the “New Liberal Arts” reform, the research addresses the need for art education to transcend regional boundaries, foster intercultural dialogue, and connecting traditional-cultural heritage with contemporary educational frameworks, rather than relying on superficial cultural juxtaposition, the study emphasizes curriculum integration as its central perspective. Batik is not simply added as decorative content; instead, its cultural genes are systematically woven into the teaching of printmaking, enabling deep and sustained pedagogical fusion to achieve this, the research proposes a three-stage integration model—pattern decoding, media experiment, and teaching symbiosis. Pattern decoding uncovers Batik’s symbolic meanings, cultural narratives, and technical logics, ensuring engagement with its cultural essence. Media experiment translates Batik’s wax-resist dyeing methods and color systems into printmaking media such as woodblock, copperplate, and screen printing, testing cross-media adaptability while maintaining cultural integrity. Finally, teaching symbiosis creates a reciprocal relationship between Batik and printmaking instruction, allowing students to experience cultural inheritance and artistic innovation simultaneously by embedding Batik into the systemic framework of printmaking education, this study demonstrates how intangible cultural heritage can enrich contemporary art pedagogy. It offers a replicable model for cross-cultural curriculum reform that promotes intercultural understanding, advances innovative teaching practices, and supports the sustainable transmission of cultural traditions.

ARTICLE INFO

Article History:

Submitted/Received 01/07/2025

First Revised 30/07/2025

Accepted 01/08/2025

First Available online 01/11/2025

Publication Date 30/11/ 2025

Keyword:

Cross-Cultural; Art Education
Intangible Cultural Heritage;
Curriculum Integration

1. INTRODUCTION

The introduction consists of the background or reasons for the research/creation, supporting theories from several literature which form a clear theoretical basis, formulation of the problem, and purpose of writing. The introduction is written in one chapter without subtitles. All exposures in the article are written in essay form, so there is no numeric and/or alphabetic format to separate chapters/sections, or to mark new chapters/sections. For this reason, if there are parts of the article that require numbering or bullet lists, make them into flowing paragraphs as follows: (1) one, (2) two, and (3) three. Note: Paragraphs 1,2,3 must use citations.

Amid the ongoing “New Liberal Arts” initiative that is reshaping art education, curriculum integration has become a crucial mechanism for linking intangible cultural heritage with contemporary pedagogical systems, and thus a focal point of current academic discourse. Indonesian Batik, recognized by UNESCO as a world-class intangible heritage, embodies the spiritual essence of Javanese civilization. (Baker & Powell, 2019)The symbolic meanings encoded in its pattern systems and the craftsmanship wisdom reflected in its material languages not only constitute a distinctive cultural cognitive framework but also provide rich potential for transformation into higher education resources.

Despite this potential, the incorporation of Batik into academic printmaking courses still shows notable limitations. (Laitupa et al., 2020) The introduction of cultural elements often remains confined to supplementary examples, which lack substantive alignment with the core objectives of printmaking, such as innovation in visual language and advancement in technique. This has created a disconnect between cultural cognition and creative practice. (Haris et al., 2018) Moreover, existing teaching models have yet to establish a systematic mechanism for translating Batik’s cultural genes—including symbolic repertoires, technical logic, and aesthetic paradigms—into curriculum content, instructional strategies, and assessment frameworks. (Chairiyani, 2014) As a result, cross-cultural teaching is frequently reduced to superficial stylistic imitation, falling short of enabling the creative transformation of traditional art. In response, this study takes curriculum integration as its methodological foundation, aiming to construct a cross-cultural innovation pathway between Indonesian Batik and academic printmaking. (Sutianah & Sobandi, 2022) It seeks to address three interrelated questions: How can Batik’s cultural genes be accurately mapped onto the objectives of printmaking education? (Chen & Cheng, 2021) Through what experimental processes can Batik’s techniques be translated into printmaking media without compromising cultural integrity? And how can an integrated framework foster a symbiotic relationship between cultural inheritance and artistic innovation? (Guntur et al., 2023) By engaging these issues, the study aspires to contribute both theoretically and practically to the sustainable integration of intangible heritage into contemporary art education.

2. METHODS

This study adopts a Design-Based Research (DBR) approach, focusing on the holistic design of curriculum integration in reference to Stewart’s (2012) curriculum development paradigm. The research framework consists of three main dimensions:

- Curriculum Content Integration
The objectives of core printmaking courses (e.g., drawing, colour, screen printing, and woodcut) are systematically aligned with Batik cultural elements—including

symbolic patterns, textural languages, and technical logics—so as to construct a three-dimensional integration matrix of “cultural elements–curricular modules–competency goals.” For instance, the Kawung diamond motif is embedded into the “Principles of Formal Beauty” unit in composition courses, thereby achieving a deep coupling of cultural symbolism with formal training.

- **Pedagogical Method Integration and Innovation**

A “dual-cycle” implementation chain is designed. The internal cycle consists of three teaching stages: “Pattern Decoding Workshop (semiotic analysis) → Texture Translation Experiment (integration of beeswax and photosensitive glue techniques) → Cross-cultural Exhibition and Critique,” enabling the transformation from cultural understanding to innovative practice. The external cycle is realized through collaboration with the Yogyakarta Batik Museum in Indonesia, jointly developing online teaching resources and involving artisans in course evaluation, thus forming a cross-border collaborative mechanism linking “universities–museums–heritage communities”.

- **Integrated Evaluation System**

A four-dimensional evaluation framework is established: (1) alignment between cultural elements and curricular objectives (expert review); (2) improvement in students’ cross-cultural translation abilities (pre- and post-project comparison of works); (3) replicability of pedagogical methods (inter-institutional transfer tests); and (4) dissemination effectiveness of cultural achievements (feedback from exhibition audiences)

3. RESULTS AND DISCUSSION

This study adopts a Design-Based Research (DBR) approach, focusing on the holistic design of curriculum integration in reference to Stewart’s (2012) curriculum development paradigm. The research framework consists of three main dimensions:

3.1. Breakthroughs in Content Integration

One of the most valuable achievements of this study is the establishment of a systematic framework linking Batik cultural elements with academic printmaking modules and competency goals. Through this framework, eight representative Batik elements were mapped to twelve printmaking course modules, forming a multidimensional integration matrix. This design moves beyond the limitations of the traditional “case-based” approach.

In conventional teaching, Batik is often introduced as decorative material or supplementary examples. Students may appreciate its patterns and colours but rarely develop a deeper understanding of its cultural logic, nor do they gain the ability to apply such knowledge effectively in their creative practice. (Van Belleghem et al., 2018) This leads to a superficial and fragmented learning experience, where Batik remains disconnected from the core objectives of printmaking. In contrast, this study translated Batik’s symbolic logic, textural language, and technical principles directly into curricular content. (Yi & Tan, 2023) Batik elements were no longer isolated add-ons but functional teaching resources that supported students’ technical mastery of printmaking. For example, in the Principles of Formal Beauty course unit, the Kawung diamond motif was used to guide students in practicing symmetry and proportion. (Liu, 2024) This not only reinforced geometric composition skills but also conveyed the cultural symbolism of life balance embedded in the motif. Similarly, wax crack textures

were introduced into the Photosensitive Plate-Making unit of screen printing, where the irregular fissures of wax were utilized as an expressive material, simultaneously teaching technical unpredictability and the cultural metaphor of “time and memory(Adi et al., 2021)”. The integration framework was highly rated by experts. Among the matched pairs, the “wax crack texture–screen printing” correspondence achieved an effectiveness score of 4.8/5, demonstrating the high compatibility between cultural elements and technical training(Kraus et al., 2019). This confirms that curriculum integration can generate genuine pedagogical value rather than serving as a superficial display of cultural heritage (Widowati et al., 2023).

Compared with existing studies, this approach displays greater systematicity. Zulkifli and Ismail (2020) observed that cultural heritage integration in art curricula often suffers from a lack of overall planning, leading to disconnection between cultural transmission and academic objectives. By mapping Batik’s “cultural genes” onto specific course modules and competency goals, this study addresses that problem directly, echoing Stewart’s (2012) idea of “deep coupling” between cultural and disciplinary knowledge. Curriculum design,(Walton, 2023) in this sense, is not simply the accumulation of content but a systematic transformation of cultural resources into active curricular components (Wellman, 2018).

3.2. Effectiveness of Pedagogical Methods

The second major outcome is the demonstrated effectiveness of the dual-cycle teaching model, consisting of both an internal and external cycle. This design emphasizes not only classroom pedagogy but also collaboration with external cultural institutions and heritage communities.

Within the internal cycle, students progressed through three stages:

- **Pattern Decoding Workshop**
Students analyzed Batik motifs through semiotic and cultural frameworks, learning to interpret shapes, lines, and colours as carriers of symbolic meaning(Na & Sharudin, 2023). For instance, the Parang curve, which symbolizes power and continuity, was not only studied as a design pattern but also contextualized within Javanese social rituals. This stage cultivated students’ critical thinking and helped them move beyond viewing Batik merely as decorative ornament.
- **Texture Translation Experiment**
Students attempted to adapt Batik’s wax-resist dyeing methods into printmaking processes. By experimenting with beeswax, resin, and photosensitive glue across copperplate, woodcut, and screen-printing media, students discovered both the technical possibilities and limitations of cross-media translation. This process enhanced hands-on skills while stimulating creative exploration of inter-media relationships.
- **Cross-Cultural Exhibition and Critique**
Student works were exhibited on campus and disseminated through online platforms, where Indonesian Batik artisans and cultural experts were invited to critique the works. Unlike conventional peer critiques limited to teacher-student exchanges, this stage introduced the perspectives of heritage bearers, reminding students of the importance of cultural authenticity and ethical responsibility.

The external cycle was realized through collaboration with the Yogyakarta Batik Museum. The museum provided access to rare artifacts and visual documentation of

traditional techniques, while artisans were directly involved in evaluating student works. Online teaching materials, such as video demonstrations of wax-resist processes, further strengthened the integration of traditional craftsmanship into the academic curriculum.

The results demonstrate significant improvements. The accurate application rate of Batik symbols in student works rose from 32% to 79%, reflecting substantial gains in cross-cultural translation skills. In addition, Batik artisans evaluated the cultural authenticity of student works with an average score of 82/100, showing that students successfully balanced innovation with respect for tradition.

Student feedback further confirmed these results. Many reported that the course was more engaging and meaningful than conventional printmaking classes. They noted that integrating Batik gave their works cultural depth and identity, transforming printmaking practice from a purely technical exercise into a culturally embedded creative process. These findings are consistent with Bramantyo (2021), who emphasized that collaboration between educators and artisans can cultivate cultural awareness and prevent superficial imitation.

3.3. Evaluation and Dissemination Value

The third major outcome concerns the validation of the four-dimensional evaluation framework, which assessed (1) alignment between cultural elements and curricular objectives, (2) student improvement in cross-cultural competence, (3) replicability of pedagogical methods, and (4) dissemination impact of student works.

In terms of inter-institutional transferability, the model was piloted at three universities of different types: a comprehensive university, an art-specialized institution, and a teacher-training college. The transfer success rate was 100%, as faculty at each institution were able to adopt the model with minimal adaptation. This indicates the framework's robustness, scalability, and potential for broader application across educational contexts.

Regarding cultural dissemination, the impact was remarkable. Exhibition attendance and online reposts of student works increased by 2.3 times compared to traditional printmaking courses. Collaborations with museums and public platforms enabled student projects to reach wider audiences, thereby positioning heritage-based art education within larger cultural dialogues. These results resonate with Haris et al. (2018), who argued that heritage-based curricular projects, when linked to public platforms, can significantly amplify cultural communication.

Perhaps most importantly, the evaluation revealed the development of students' intercultural literacy. Through direct interaction with artisans and cultural experts, students learned to negotiate the balance between cultural authenticity, artistic innovation, and ethical responsibility. This multidimensional growth echoes Khechekhouche et al. (2020), who emphasized that cross-cultural evaluation frameworks must consider not only artistic quality but also cultural respect and ethical accountability.

3.4. Discussion

Taken together, these results demonstrate the transformative potential of curriculum integration in art education. Unlike conventional approaches that treat intangible cultural heritage (ICH) as peripheral content, this model places Batik at the center of printmaking pedagogy, enabling it to function as an active curricular agent.

At the theoretical level, this study offers a new pathway for embedding ICH into modern higher education. It challenges the binary opposition between “traditional” and “modern” practices, showing instead that the two can coexist in a mutually reinforcing relationship. Students were able to acquire technical printmaking skills while simultaneously engaging with the symbolic wisdom embedded in Batik traditions. This contributes to ongoing debates in art education by demonstrating that cultural preservation and innovation are not mutually exclusive but can be integrated within a single pedagogical framework.

At the practical level, the study illustrates the model’s strong operability and transferability. Its successful implementation in three different types of universities suggests that it is not limited to art-specialized contexts but also applicable in teacher training and comprehensive education. This provides a reference for promoting similar integration frameworks across regions and disciplines.

Nevertheless, the model also presents certain challenges. Some students initially struggled with superficial interpretations of Batik symbols, requiring instructors to provide additional cultural guidance. Moreover, sustained cross-cultural collaboration depends on institutional support in terms of funding, partnerships, and policy frameworks. Without long-term infrastructure, such integration risks being reduced to temporary projects rather than sustainable practices.

Overall, the findings affirm that curriculum integration not only enhances teaching effectiveness but also strengthens cultural transmission and dissemination. The study demonstrates that Batik can be transformed from a cultural artifact into a pedagogical resource, enriching both student learning and heritage preservation. This provides a replicable model for embedding intangible cultural heritage into contemporary education, while offering valuable insights for the advancement of cross-cultural art pedagogy.

4. CONCLUSION

The perspective of curriculum integration, this study has successfully constructed a cross-cultural innovation pathway between Indonesian Batik and academic printmaking, confirming curriculum integration as an effective solution to the long-standing challenge of embedding intangible cultural heritage (ICH) into contemporary art education. At the practical level, the study proposes a threefold innovation framework of significant value. First, the curriculum content integration system systematically aligns Batik’s cultural genes with printmaking learning objectives, thereby avoiding the superficiality of case-based introductions and achieving precise mapping between cultural elements and disciplinary knowledge.

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Second, the “dual-cycle” teaching model links classroom-based pattern decoding, technical experimentation, and cross-cultural exhibitions with international collaborations

involving museums and heritage communities, thus extending the depth and breadth of ICH education. Third, the four-dimensional evaluation framework not only addresses the alignment between cultural elements and curricular objectives but also incorporates indicators of student capacity development, pedagogical replicability, and cultural dissemination effectiveness, thereby providing a scientific basis for curriculum optimization and model promotion. Theoretically, this study further demonstrates that curriculum integration is not a mechanical accumulation of cultural content but a systematic design process that transforms cultural genes into the “active ingredients” of the curriculum.

Such a transformation mechanism not only facilitates the creative transformation and innovative development of ICH resources but also offers theoretical support and practical models for advancing cross-cultural art education. Future research may extend this work in several directions: first, by exploring curriculum integration pathways for a wider range of ICH resources and developing diversified integration modules; second, by promoting inter-university and inter-regional curriculum alliances and resource-sharing mechanisms to build sustainable teaching communities; and third, by examining the long-term impact of curriculum integration on learners’ cross-cultural literacy, creative thinking, and artistic identity formation.

In sum, this study not only proposes a replicable and promotable model of curriculum integration but also provides actionable strategies and reference value for cross-cultural curriculum reform in the field of art education.

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