# Preserving Hmong Batik Through Video Games

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## BODY TEXT

This ongoing research explores how video games can contribute to the safeguarding of intangible cultural heritage. Blockbuster titles such as *Tomb Raider* (Crystal Dynamics, 2008), *Black Myth: Wukong* (Game Science, 2024) and *Assassin's Creed* (Ubisoft, 2007) remind players of cultural heritage through their virtual architecture and narrative worlds. Although these entertainment-focused AAA releases were not created expressly for preservation, they expose previously little-known places, names and imagery to broad audiences (Balela, 2015). As a medium with vast potential, video games can therefore play a distinctive role in protecting cultural heritage by combining education with engaging, interactive experiences. *Batiked*, a Unity-based 2D platformer created in this project, adopts a two-tone Hmong batik palette and rule-based tile mapping to translate the sequential logic of wax-resist batik—waxing, dyeing and melting—into virtual pattern creation and erasure. The game demonstrates how minimalist visuals can maintain cultural legibility while re-imagining an intangible craft process as a spatial puzzle, all without textual exposition.

Many excellent video games on the market successfully integrate diverse artistic styles with gameplay, storytelling, and artistic expression. Examples include the ink painting aesthetics in *Okami* (Clover Studio, 2006) and *Inked* (Somnium Games, 2018), the watercolor visuals of *Gris* (Nomada Studio, 2018), and the embroidery-inspired style of *Scarlet Deer Inn* (Attu Games, 2024). Yet, to date, very few video games have explored the artistic style of batik, particularly Hmong batik.

Batik is an ancient resist-dyeing technique with traditions in countries such as Indonesia, Malaysia, and China. In southwestern China, where I come from, the Hmong people have developed a unique interpretation of batik. This form of Hmong folk art is valued for its intricate patterns, designs, compositions, and its distinctive aesthetic created through points, lines, and surfaces. Having lost their traditional written language during ancient wars with the Han (China's majority ethnic group), the Hmong people have preserved their history and culture through the patterns in their batik. These designs are deeply embedded in their daily lives, appearing in clothing, fabrics, and more.

Despite its cultural importance, Hmong batik faces decline: fewer skilled practitioners remain, and youth migration and industrial imitations threaten its survival. Intergenerational knowledge transfer is fragile in key regions like Qiandongnan, Guizhou (Chen, 2020). Having grown up in Guizhou, I aim to

contribute to its cultural preservation by exploring how video game can support endangered traditions.

This study investigates video game design to serve as an interactive tool for preserving and promoting Hmong batik through the Research through Design (RtD) methodology. By integrating puzzle-based gameplay, narrative elements, and cultural symbolism on 2D platformer, this research examines how digital platforms can bridge the gap between traditional art forms and players' fragmented daily behaviors. These behaviors, shaped by the immediacy and diversity of digital media, often result in segmented attention and shorter gaming sessions (Neuman, 2017).

The game's level design draws extensively on Hmong batik elements, especially motifs imbued with mythic imagery. Platforms on which the player can stand feature Hmong patterns symbolizing stone, while walls and impassable boundaries display stone motifs unique to Hmong art. All of these visual designs originate from the creative labor of Hmong women, carrying the weight of their profound and vibrant cultural traditions. Yet when we trace the provenance of these batik patterns, the creators' names are often lost to history, making attribution nearly impossible. The sorrow this evokes compels me, throughout my research, to consider how the findings can be meaningfully returned to the Hmong communities of Guizhou.

In play, wax is harvested at designated basins and carried in the tip of a stylus, echoing how a melting wax container as a drawing pen can hold only couple of drops at a time. Players dot and trace lines onto blank cloth tiles, but the stylus empties quickly, forcing deliberate routes back to the basin and making resource awareness part of the puzzle. Wax hardens into climbable blocks that lift the avatar toward higher ledges, yet a torch can melt those same blocks, letting the liquid re-flow into new shapes or reveal hidden glyphs beneath. Every placement, flow and melt is logged, generating traces of cultural legibility, while the low-saturation blue-and-white scheme keeps assets light and symbols clear, illustrating minimalist design for small-scale intangible cultural heritage games.

The larger claim I intend to advance is therefore twofold: (1) practice-based game design can function as a methodological bridge between ethnographic craft research and Human-Computer Interaction, offering reproducible, data-rich experiments; (2) by turning the wax-resist workflow itself into the game's underlying physics, the prototype demonstrates a transferable design method, one that keeps the craft's internal logic intact and offers a replicable blueprint for translating other forms of intangible heritage into playable systems, without relying on textual explanation.

In short, *Batiked* is presented not as a finished artefact but as an executable argument that games can *perform* heritage—and that such performance can be evaluated, archived, and iterated within academic discourse. As an ongoing, exploratory project, each build functions as both experiment and inquiry, progressively testing the boundaries of what a video game *is* today and what it *might yet do* for the preservation and reinvention of Hmong batik tomorrow.

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