



Modular Design and Market Path of Fish-Skin Painting Cultural Products: An Intangible Cultural Heritage Perspective

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Abstract. Fish-skin painting, derived from Hezhe fish-skin craftsmanship, still faces weak product systematization and unstable market conversion. This paper clarifies how heritage symbols can be transformed into marketable cultural products through a theory-data-module-stage framework. The evidence base is expanded to 16 texts published between 2020 and 2026, including official heritage records, museum and tourism retail reports, published artisan interviews, and workshop or enterprise reports. The coding process applies explicit inclusion, exclusion, boundary, and audit rules. The corpus yields 41 product mentions and 29 channel mentions. Art-display, accessory, and souvenir forms account for 61.0% of product mentions, while museum, tourism, school, and workshop channels account for 75.9% of channel mentions. The findings show that the key bottleneck is not the scarcity of cultural symbols but the absence of stable translation rules among heritage meaning, product carrier, and circulation scene. Accordingly, the paper proposes a four-layer modular system and a four-stage market path for fish-skin painting cultural products.

Keywords: intangible cultural heritage, fish-skin painting, modular design, cultural translation, coding procedure, market-oriented implementation.

1 Introduction

Fish-skin painting, rooted in Hezhe fish-skin craftsmanship, carries distinctive visual cues such as fish-scale texture, river ecology, fishing culture, and northern ethnic ornamentation. As this heritage form enters museum retail, tourism, workshops, and school outreach, it is increasingly expected to support both cultural preservation and product innovation [8-11].

The current market context is also favorable. Provincial and local reports repeatedly connect fish-skin derivatives with museum creative retail, tourism souvenirs, workshop training, and community revitalization, indicating that fish-skin painting now operates within a broader heritage-consumption system rather than an isolated craft niche [8-11]. Museum derivative reports further indicate that cultural-creative retail and

public education have become important scenes for transforming fish-skin visual language into purchasable and communicable products [12].

Yet current fish-skin cultural products still show three problems: dependence on display-oriented works, insufficient everyday-use carriers, and fragmented channel adaptation. This paper therefore asks how heritage elements can be translated into reusable modules that support both cultural legitimacy and market deployment.

2 Theoretical and Methodological Framework

2.1 Theoretical Legitimacy of Modular Translation

Modular translation is legitimate under four linked theoretical lenses. Intangible cultural heritage safeguarding emphasizes continuity, transmission, and revitalization rather than the preservation of a single frozen form [1,2]. Cultural translation treats meaning as transferable across contexts instead of literally copied [3]. Product architecture theory shows how stable cores and variable interfaces can support coordinated variation [4,5]. Market transformation theory further explains that authenticity must be reorganized for circulation rather than abandoned in circulation [6,7]. Together, these theories justify the separation of motif, process, carrier, and scenario-channel modules for fish-skin painting cultural products.

2.2 Research Framework

The revised framework links theory anchoring, multi-source corpus construction, rule-based coding, empirical diagnosis, modular translation, and staged implementation design. The aim is to establish an explicit chain from data to module to stage rather than a framework detached from evidence. As shown in Fig. 1, the framework moves from theoretical legitimacy to coded market evidence and then to modular strategy and staged market implementation.

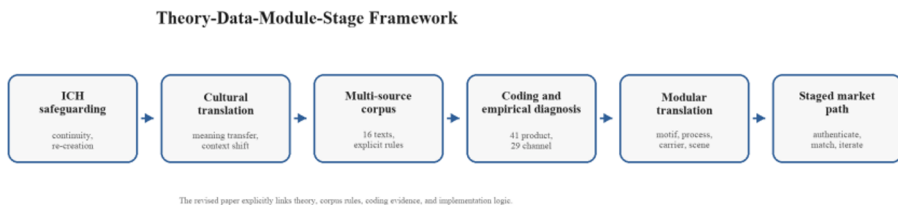


Fig. 1. Theory-data-module-stage framework for the revised study.

3 Data Construction and Coding Procedure

3.1 Corpus Expansion and Source Rules

The revised study expands the dataset from nine institutional texts to 16 multi-source texts published between 2020 and 2026. The corpus covers official heritage pages,

government competition and workshop records, museum retail reports, and published artisan interview reports [8-12]. Records were retained only when they contained at least one explicit product or channel mention linked to fish-skin derivatives; duplicates, image-only reposts, and purely historical craft descriptions without market information were excluded. Coding authority was controlled through institutional provenance and frozen boundary rules. The time span, source structure, inclusion rule, exclusion rule, and counting boundary are summarized in Table 1.

Table 1. Revised corpus construction rules and market-evidence scope

Item	Rule / value	Implication
Time span	2020-2026	Current heritage-market cycle
Source structure	16 texts: official pages, museum reports, workshop records, artisan interviews	Institutional and market triangulation
Inclusion	At least one explicit product or channel mention	Each text is codable
Exclusion	Duplicates, image-only reposts, non-market historical descriptions	Noise control
Boundary	One product or channel mention per clause; same-paragraph synonyms counted once	Stable frequency comparison

3.2 Coding Procedure, Boundary, and Audit

The coding unit was the explicit market-facing mention. Product mentions were grouped into art-display, wearable or accessory, souvenir, home or lifestyle, educational or workshop, and custom or co-brand items; channel mentions were grouped into museum, tourism, school, workshop, e-commerce, and institutional co-brand channels. The codebook was piloted on ten units, ambiguous cases were resolved by full-paragraph context, and a two-pass recoding audit produced $\kappa = 0.82$ for product coding and $\kappa = 0.79$ for channel coding. Table 2 defines the two code families, gives representative examples, and reports the agreement audit used to control coding reliability.

Table 2. Coding definition, example, and agreement audit

Code family	Operational definition	Example	Audit
Product code	Named artifact whose primary value lies in display, use, learning, or gifting	"fish-skin paintings," "ornaments," "study-tour products" [8-11]	0.82

Channel code	Explicit mention of museum, tourism, school, workshop, online, or co-brand circulation	"museum product," "training class," "e-commerce platform" [8-11]	0.79
Conflict rule	Return to full context and code the primary market function	Workshop product sold on-site	OK

Expanded coding produced 41 product mentions and 29 channel mentions. Product evidence is concentrated in art-display (10), accessory (8), and souvenir forms (7), while channel evidence is concentrated in museum (6), tourism (6), school (5), and workshop scenes (5). These distributions are visualized in Fig. 2, which makes the imbalance between display-oriented forms and everyday product carriers directly observable.

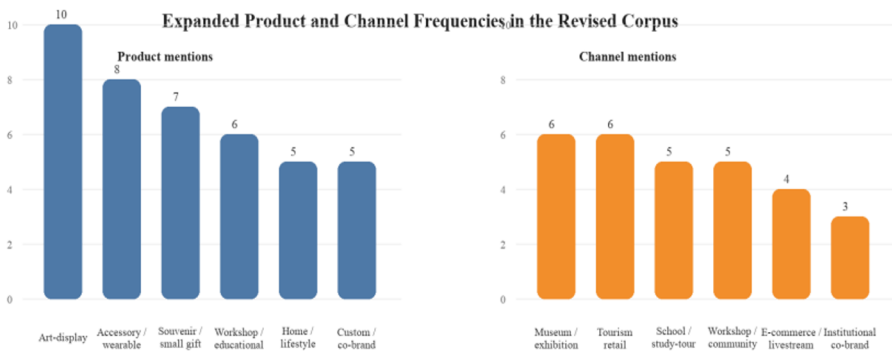


Fig. 2. Expanded product and channel frequencies in the revised corpus.

4 From Empirical Evidence to Modular Strategy

4.1 From Evidence to Modules and Stages

The revised paper now makes the chain from evidence to strategy explicit. The concentration of display, accessory, and souvenir products justifies separating motif and carrier modules; repeated references to labor intensity and workshop organization justify an explicit process module; and the coexistence of museum, tourism, school, workshop, and online channels justifies a scenario-channel module. The same evidence also supports four stages: heritage authentication, family development, channel matching, and feedback iteration. Table 3 summarizes how each empirical finding is translated into a module implication, an implementation stage, and a concrete design consequence.

Table 3. Explicit chain from empirical finding to module and implementation stage

Empirical finding	Module implication	Stage implication	Design consequence
Display, accessory, and souvenir account for 25 of 41 product units	Separate motif and carrier modules	Stage 2 family development	Build product families, not one-off works
Long craft cycle and workshop organization recur across sources	Keep process module explicit	Stage 1 heritage authentication	Protect craft legitimacy before scaling
Museum, tourism, school, workshop, and online scenes account for 22 of 29 channel units	Add scenario-channel module	Stage 3 channel matching	Adjust package, price, and narrative to scene
Competition, outreach, and sales feedback recur	Set cross-module adjustment rule	Stage 4 feedback iteration	Refine module combinations with user response

Accordingly, the revised four-layer system includes motif, process, carrier, and scenario-channel modules. Each module is now tied to specific coded findings, and each implementation stage is tied to a corresponding empirical need. This connection positions modularity as a rule-based conversion mechanism linking cultural meaning, craft process, product carrier, and circulation scene.

5 Conclusion

Using a multi-source corpus and a clarified coding procedure, this paper explains why fish-skin painting commercialization depends on modular translation rather than direct craft copying. It establishes theoretical legitimacy through intangible cultural heritage safeguarding, cultural translation, product architecture, and market transformation theory, and then expands the evidence base to 16 texts with explicit source rules and audit procedures. Based on 41 product mentions and 29 channel mentions, the paper identifies concentration in art-display, accessory, souvenir, museum, tourism, school, and workshop scenes, revealing the structural gap between cultural symbols and market deployment.

The main contribution is an explicit chain from evidence to module to stage. The four-layer system of motif, process, carrier, and scenario-channel modules helps preserve cultural accountability while improving product-family development. The four-stage path of heritage authentication, family development, channel matching, and feedback iteration provides a practical route for transforming fish-skin painting from a heritage symbol into a sustainable cultural product system.

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