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Platformised Authenticity: A Digital Sustainability Framework for Intangible Cultural Heritage

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Abstract

This study examines how authenticity is formed and negotiated in the digital dissemination of intangible cultural heritage under platform-based cultural production. It develops a Platformised Authenticity Framework (PAF) to explain the relationship between authenticity, commercialisation, and digital sustainability. Using a mixed-methods design, the study combines a systematic literature review and bibliometric analysis of Scopus-indexed publications with a qualitative case study based on interviews with eight key stakeholders. The findings identify three interrelated stages of platformised authenticity: the display stage, in which heritage is made visible through visual narratives in digital environments; the perception stage, in which algorithmic recommendation and audience judgement shape cultural credibility; and the experience stage, in which emotional engagement and participatory interaction support social reproduction. The analysis further shows that inheritors, content creators, and users play different but interconnected roles across these three stages. By moving beyond a static understanding of authenticity, this study shows that the digital sustainability of intangible cultural heritage depends on the continued interaction among material integrity, platform visibility, and participatory cultural experience.

Keywords: Digital Sustainability; Platformised Authenticity; Platformisation; Sustainable Development; Cultural heritage

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Introduction

Intangible cultural heritage (ICH) is regarded as a key resource for preserving cultural diversity and is increasingly being incorporated into the sustainable development agenda (Soeswoyo et al., 2025). Globally, the survival space for ICH is rapidly shifting to digital platforms. Short videos and live streaming have significantly broadened audience reach and enhanced cultural visibility within public spaces (Briciu et al., 2025). These platforms enable artisans and local communities to connect with a wider audience through concise and intuitive visual storytelling. While this creates new conditions for social sustainability, it introduces new risks and uncertainties.

Upon entering the platform environment, ICH has developed a new sustainability dilemma. Dissemination must address the requirements of safeguarding cultural substance and ethical norms while adapting to traffic mechanisms centred on click-through rates, conversion rates, and the commercial logic of platforms (Stewart & Stewart, 2023; Bortolotto, 2020). Under such tensions, authenticity remains the core value of ICH and serves as the key indicator for assessing long-term sustainable development in the digital age.

The concept of “platformisation” offers a crucial analytical lens, highlighting the profound penetration of platform infrastructure, data-driven logic, and algorithmic governance into cultural production (Poell et al., 2019). Platforms expand the economic value of culture through commercialisation while driving content towards homogenisation (Duffy et al., 2019). Against this backdrop, digital sustainability depends on appropriately utilising platform mechanisms while preserving cultural depth.

Existing research examines the relationship between digital technology and authenticity from various perspectives. Traditional heritage protection emphasises safeguarding authenticity through historical continuity and material preservation (Miao, 2024). Conversely, the application of new technologies like digital twins and virtual exhibitions explores visibility while reshaping evaluative criteria (Wen & Xu, 2024; Jover & Sempere, 2025). Recently, scholars have proposed “digital sustainability” indicators (Yan et al., 2025), but research often focuses on isolated practices rather than a comprehensive framework. This study fills a critical gap by conceptualising authenticity as a recursive, three-stage generative process mediated by algorithmic governance.

Consequently, this study addresses three research questions: (1) How have existing heritage studies traditionally defined authenticity in contrast to the emerging platform-based perspective? (2) How does platformised cultural production reconfigure the essence and generative mechanisms of authenticity? (3) What specific insights does the mechanism for generating authenticity offer regarding

the digital sustainability of ICH within platform environments?. Theoretically, this analysis advances the understanding of authenticity from static attributes towards dynamic generative mechanisms. Practically, it provides policymakers and practitioners with a framework for balancing algorithmic logic with cultural values (Wang et al., 2025).

Methodology

This study adopts a mixed-methods design integrating systematic literature review, bibliometric analysis, and qualitative case validation. This sequential design allows the research to move from pattern recognition to framework construction and empirical testing. Relevant studies in the Scopus database were screened according to the PRISMA protocol to ensure reproducibility (Mishra & Mishra, 2023). Macro-level maps of authenticity and platformisation research were constructed using the Bibliometrix package in R and VOSviewer 1.6.20 (Dekhnich & Litvinova, 2024). Finally, the Dezhou Black Pottery case was introduced, employing deductive qualitative coding via NVivo 14 to validate the Platformised Authenticity Framework (PAF).

Data Sources and Inclusion Criteria

Scopus was selected as the sole database due to its high coverage and rigorous peer-review standards across the social sciences, arts, and computer science. This ensures comprehensive coverage of core concepts like platformisation and cultural production (Baas et al., 2020). Inclusion criteria comprised peer-reviewed English research published between 2018–2025, covering journal articles, conference papers, and books. Scopus was the exclusive data source to ensure high-impact interdisciplinary research for the PAF construction. Exclusion criteria removed non-English works, research notes, and items outside the specified timeframe or subject categories.

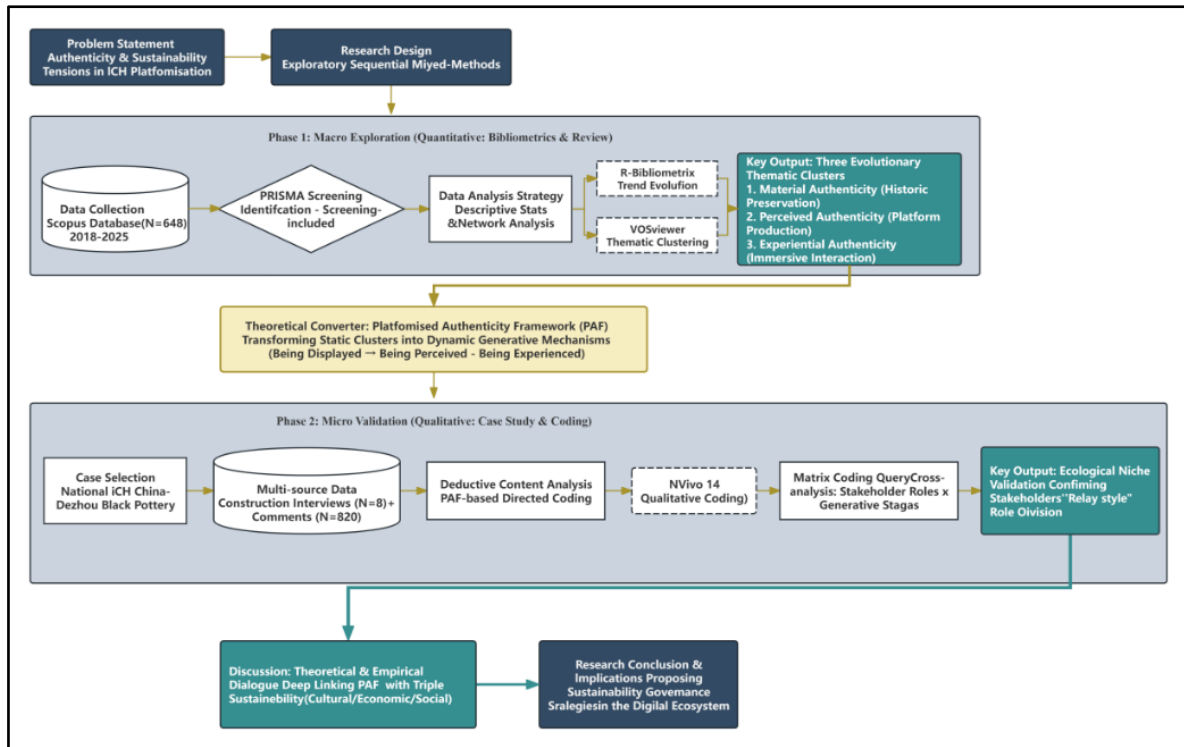


Figure 1. Research Design

Search Strategy and Literature Screening

Grounding the strategy in Boolean logical operators (Xue et al., 2025), the study constructed three retrieval domains: "ICH and Authenticity", "Platformisation and Production", and "Platform and ICH". A search in Scopus retrieved 648 documents; after removing duplicates and screening by title and abstract, 626 articles were retained for analysis. The process adhered to PRISMA 2020 guidelines (Haddaway et al., 2022).

Bibliometric Analysis and Thematic Clustering

Descriptive statistics were conducted via Bibliometrix, with the period segmented (2018–2021, 2022–2023, 2024–2025) to track shifts in thematic focus. At the micro level, VOSviewer was used to identify clusters with semantically proximate meanings (Deng et al., 2025). Keywords were filtered for a minimum frequency of three, and lexical cleansing was applied to normalise synonyms and minimise bias.

Theoretical Mapping and Framework Construction

Following clustering, a theory-driven systematic review approach categorised literature by research themes and keyword associations (Simonetti et al., 2025). Three pathways were distilled: historical preservation/material authenticity; platformised production/perceptual authenticity; and immersive interaction/experiential authenticity. These were mapped onto the stages of "being displayed", "being

perceived", and "being experienced" to elucidate the generative mechanisms of the authenticity dilemma within platform contexts.

Qualitative Validation: Case Studies and Coding

To reveal micro-level practical mechanisms, interpretive case studies were used to validate the PAF (Gomes et al., 2024). Dezhou Black Pottery was selected for its blend of traditional craft and platformised commercial operations on Douyin. Semi-structured interviews were conducted with eight key informants (inheritors, creators, and users) as tabled in Table 1, reaching theoretical saturation. Additionally, 820 valid user comments were extracted via web crawling and manual screening. Adhering to ethical standards (Khder, 2021), materials were anonymised before deductive content analysis. Matrix coding and cross-tabulation were utilised to test the framework's explanatory power across actual platform practices (Tolegen et al., 2024).

Table 1. Interviewee information

Sample Group	Number	Work Unit	Characteristics
Inheritors	1-2	Dezhou ICH Protection Center	Intangible cultural heritage inheritors of Dezhou black pottery, possessing thorough knowledge of traditional craft processes and technical standards.
Content creators	3-5	Douyin content production team for Dezhou Black Pottery	Creators involved in the production and dissemination of short video content about Dezhou black pottery
Users	6-8	Douyin platform users	Features including commenting, liking, sharing, and potential consumer behaviour

Results and Discussion: Thematic Clustering

Historical Preservation and Material Authenticity

The first thematic cluster focuses on traditional heritage conservation but has progressively integrated tourism development, sustainable development, and digital technology. High-frequency keywords include "heritage tourism", "historic preservation", and "sustainability". Analysis indicates a shift from physical safeguarding (pre-2021) to cultural identity construction (2022–2023) and, finally, to a sustainable conservation paradigm utilizing digital tools (2024–2025).

Early research regarded authenticity as an objective criterion, focusing on preserving original integrity through restoration (Farrelly et al., 2019). This "material authenticity" ensures the historical continuity of cultural heritage in terms of composition and form, providing the physical foundation for ICH sustainability (Demirel et al., 2025). While tourism studies link authenticity to emotional memories and cultural identity (Zhang & Yin, 2020; Seyfi et al., 2024), excessive commercialisation can erode the authenticity of cultural experiences (Sannazzaro et al., 2025). Sustainable safeguarding must treat authenticity as a long-term regulatory process within cultural ecosystems (Orbaşlı, 2025; Wang et al., 2025). This requires considering community participation and environmental pressures to maintain self-regulation (Zhu, 2025). Digital technologies like virtual reality and three-dimensional modelling are

now employed to reconstruct traditional settings, rendering authenticity visible within digital media as an extension of material authenticity (Roggio et al., 2025; Wang et al., 2025; Hanif, 2023).

Platformised Production and Perceived Authenticity

The second cluster centers on platform infrastructures and their role in reshaping content distribution and audience credibility. Evolution in this field moved from political-economic critiques of platform capitalism (pre-2021) to algorithmic governance (2022–2023) and, finally, to platforms as integrated systems shaping public visibility (2024–2025). Authenticity is no longer merely an inherent attribute but is embedded within the platformised production chain (Orbaşlı, 2025; Hanif, 2023).

Platformisation represents an institutional process integrating cultural production into algorithmic governance, data logic, and commercial models (Poell, 2020). Algorithms emerge as new intermediaries that determine spreading pathways and participate in shaping meaning (Verwiebe et al., 2024; Walter & Friesike, 2025). On platforms like TikTok and Instagram, algorithmic recommendation endows "visibility" with authentic meaning, re-encoding traditional craftsmanship as consumable media symbols to grant it renewed social vitality (Brown, 2025; Sharma et al., 2025). In these contexts, authenticity manifests as a "perceived authenticity" shaped through visual experience (Zhu et al., 2025; Genc & Gulertekin Genc, 2022). This creates a dual tension: algorithms increase the visibility of ICH (Li, 2024; Briciu et al., 2025; Wang et al., 2025) while simultaneously driving a tendency toward performative and homogenised cultural content (Yan et al., 2025).

Immersive Interaction and Experiential Authenticity

The third cluster explores how immersive technologies reconfigure cultural experiences through virtual environments and interaction. Focus has shifted from foundational technical design (pre-2021) toward cultural applications and virtual reconstruction (2022–2023) and, finally, to authenticity as an experiential process shaped by participation and engagement (2024–2025). Technological iteration continues to redefine the field (Burrus et al., 2024; Kapusta, 2025).

Despite rapid advancement, challenges to content authenticity persist (Hashim et al., 2024). Authenticity is redefined here as "experiential authenticity", shaped jointly by user perception, emotions, and participation (Jin et al., 2020; Kukshinov & Nacke, 2025). VR, AR, and HCI technologies translate visual interactions in virtual exhibitions into emotional connections with culture. Interaction design research examines how assessments of AI-generated content influence these immersive experiences (Zhong et al., 2025; Li et al., 2024). From a sustainability perspective, authenticity has expanded into a subjective experiential process. Immersive experiences offer new pathways for intergenerational transmission, forge emotional connections within virtual spaces, and allow remote

engagement with traditional culture (Zhao et al., 2025; Rodríguez Campo et al., 2024). With the advent of generative AI, this may further evolve into a dynamic process collaborative engagement among users, technology, and cultural resources (Albakry et al., 2025).

Table 2. Consolidated dimensions of the Platformised Authenticity Framework

Framework	Integrated Framework	Definition	References
Historical preservation and material authenticity	Material Composition	In heritage conservation, preserving original materials, traditional craftsmanship, and spatial forms maintains the historical continuity and integrity of culture.	[1, 16, 21, 75]
	Cultural Ecological Continuity	Emphasising community participation and the equilibrium of cultural ecosystems, authenticity shifts from static preservation to dynamic transmission.	[6, 43, 54, 67, 78]
	Digital Reproduction	By reconstructing traditional cultural scenes through technologies such as virtual reality and three-dimensional modelling, authenticity is extended to the visual and perceptual dimensions of digital media.	[27, 50, 70]
Platformised production and perceived authenticity	Perceptual Intermediary	Authenticity is jointly constructed by the visual, narrative, and algorithmic dimensions, no longer dependent upon cultural substance but rather a perceptual reality generated through platform mediation.	[45, 65, 66]
	Platformised Cultural Reproduction	The platform transforms intangible cultural heritage content into shareable and replicable media symbols, thereby facilitating the reproduction of culture within the digital environment.	[11, 22, 56, 79]
	Algorithmic Visibility	Platform algorithms determine the visibility of cultural content through recommendations, traffic allocation, and interaction data, rendering authenticity as 'the truth that is seen.'	[39, 47, 69, 73]
Immersive interaction and experiential authenticity	Embodied Involvement	The embodied experience gained by users through physical movements, operations, or simulated practice.	[29, 32, 36]
	Affective Immersion	The emotional resonance and psychological presence experienced by users through visual, auditory, narrative, and interactive processes deepen their experiential understanding of cultural content.	[38, 52]
	Co-creative Meaning Making	Users, creators, and platforms collectively construct cultural meaning and perceptions of authenticity through commentary, re-creation, and community interaction.	[49, 54, 76]

Platformised Authenticity Framework and Case Validation

Building on the three pathways identified, this study proposes the PAF to reconceptualise authenticity as a dynamic process generated through multi-agent collaboration and algorithmic mediation within digital ecosystems. The PAF construction integrates content analysis with bibliometric techniques to aggregate literature by research themes (Samadilashkariani & Engström, 2025; Stefanis et al., 2025; Hornung, 2022). As shown in Figure 2, the PAF decomposes authenticity into three recursive stages aligned with cultural, economic, and social sustainability.

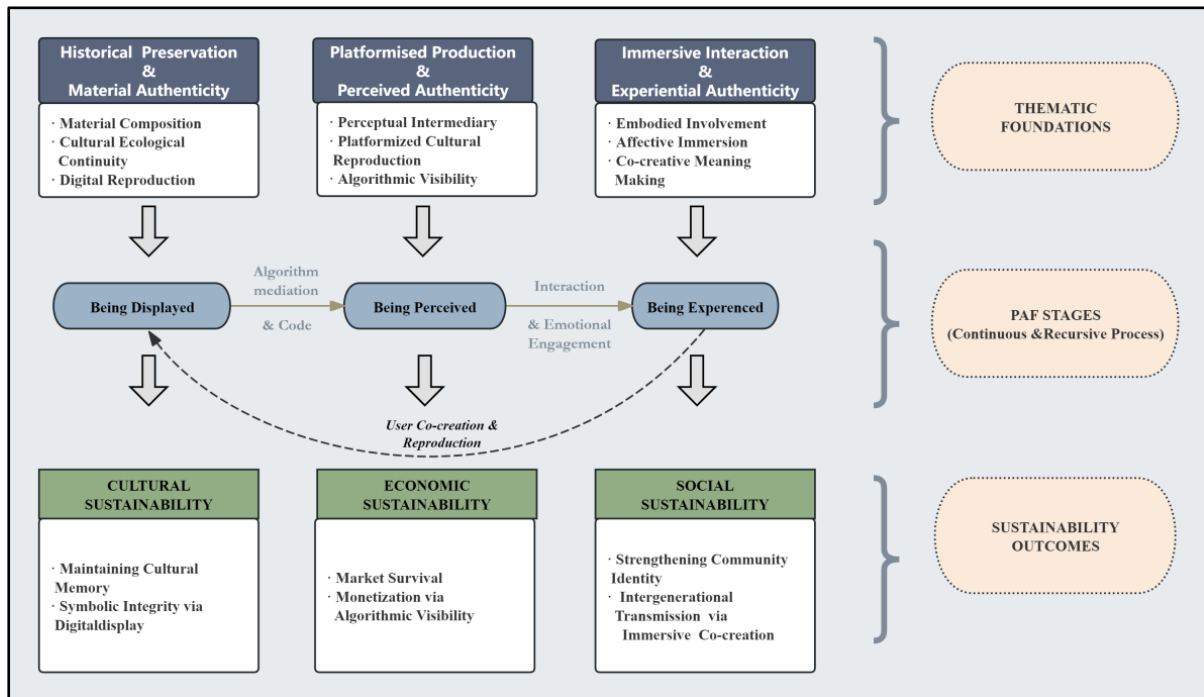


Figure 2. Platformised Authenticity Framework

"Platformised authenticity" is defined as the process co-created by inheritors, content creators, and users through algorithmic mediation. This functions as a recursive cycle where the "experience" stage generates new data that feeds back into the "display" stage.

- **Being Displayed Stage:** Authenticity commences here as ICH transforms from material objects into visualisable digital narratives like short videos (Ruan et al., 2025; Smaniotto Costa et al., 2024). Algorithmic recommendations determine which symbols are seen, rendering authenticity as a form of displayable reality (Srinivasan, 2024; Briciu et al., 2025). This cultural mediation provides the foundation for cultural sustainability by amplifying core techniques through digital archiving (Murray, 2023; Li & Kookiattikoon, 2024).
- **Being Perceived Stage:** Algorithms recode cultural content, reshaping perceptions through ranking and traffic allocation (Brown, 2025; Alvarado et al., 2021; Ávila Torres & Beer, 2025). While homogenisation is a risk, this stage effectively achieves economic sustainability by transforming marginalised resources into viable market forms through live-streaming and brand collaborations (Fan et al., 2025; Samper-Mendivil et al., 2025).
- **Being Experienced Stage:** Users transform content into personal emotional experiences through re-creation and feedback (Bui & Tran, 2023; Alahakoon & Udunuwara, 2021; Rodríguez Campo et al., 2024). This participatory engagement bridges the gap between traditional techniques and contemporary life, forging the social sustainability required for living transmission (Boonchoo, 2024; Duong Thị Thu, 2025).

Empirical Validation: Dezhou Black Pottery

To test the PAF, Dezhou Black Pottery was selected for its balance of traditional craftsmanship and platformised operation.

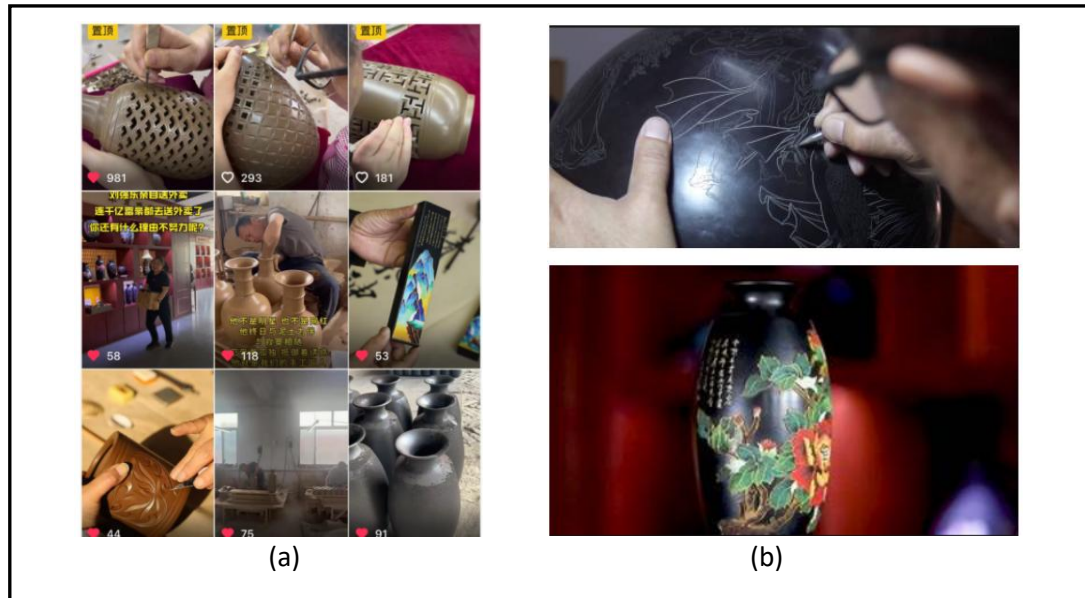


Figure 3. (a) Dezhou Black Pottery Short Video Account; (b) Exhibition of Selected Products from Dezhou Black Pottery.

The study employed deductive content analysis, using the three stages as first-level coding nodes. Coding sub-categories included visual presentation and platform optimisation for "Display", algorithmic mediation for "Perception", and user participation for "Experience". Narrative threads were linked through selective coding to construct a relational structure (Hulstein et al., 2023).

Matrix coding query functions in NVivo cross-analysed distributions among stakeholders (Goyal & Deshwal, 2022). The results, presented in Table 3, reveal distinct focal points:

- Inheritors primarily shoulder the "Display" stage, upholding material authenticity to provide legitimate resources for digital dissemination.
- Content Creators act as cultural interpreters during the "Perception" stage, aligning traditional skills with traffic algorithms to foster economic sustainability.
- Ordinary Users drive the "Experience" stage, where emotional feedback and interaction underpin the social sustainability of digital ICH transmission.

This multi-stakeholder collaborative ecosystem serves as a vital mechanism for mitigating authenticity dilemmas in the digital existence of ICH.

Table 3. Specific Encoding Strategy

Main Category	Secondary Category	Detailed Coding	Example statement (from an interview/commentary)
Being Displayed	A1:Visual presentation	A1-1. Craftsmanship Display	“The video must capture the entire process of throwing the clay on the wheel for viewers to believe it's handmade”. (Interview 1)
		A1-2. Ritual Reconstruction	“Before presenting new pottery, we must include shots of ancestral incense offerings to enhance authenticity “(Interview 2).
		A1-3. Production Space Reorganisation	
	A2:Narrative Strategy	A2-1. Narrative Tone	“I generally use the first person to narrate, as it feels more intimate “. (Interview 2)
		A2-2. Background Symbols	“We must capture the ancestral home and old kiln for viewers to feel a sense of roots”. (Interview 1)
		A2-3. Time Rhythm	
	A3:Platform Optimisation	A3-1. Title Keywords	“Include terms like ‘intangible cultural heritage’ and ‘inheritor’ in the title to make it easier for the system to recommend“. (Interview 4)
		A3-2. Hot Topics	
		A3-3. Cover Composition	
Being Perceived	B1.Algorithmic mediation	B1-1.Recommendation Mechanism	“Once a video is posted, a high number of recommendations indicates the platform's endorsement of the content“. (Interview 5)
		B1-2. Exposure Rhythm	
		B1-3. Platform Weight	
	B2.Media Perception	B2-1. Visual Impact	“Traditional music allows audiences to better appreciate the old-fashioned charm“. (Interview 3)
		B2-2. Music and Narration	“Only after witnessing the pottery-firing process did I realise how demanding this craft truly is“. (Comment C231)
		B2-3. Cultural Understanding	
	B3. Emotional Response	B3-1. Amazement and Curiosity	“So authentic, it feels like being there“. (Comment C417)
		B3-2. Nostalgia	“Watching this reminded me of my grandfather who worked in this trade when I was a child“. (Comment C552)
		B3-3. Empathy	
Being Experienced	C1:User Participation	C1-1. Comment Interaction	“The master craftsman's answer to my question was utterly delightful!“ (Comment C600)
		C1-2. Live Feedback	“I'd love to try making one myself“. (Comment C609)
		C1-3. Like and Collect	
	C2:Secondary Creation	C2-1. Imitation and reproduction	“I used the same mould to film a short video“. (Comment C672)
		C2-2. Co-create content	“We'll livestream making black pottery together“. (Interview 5)
		C2-3. Joint Communication	
	C3:Cultural Identity	C3-1. Regional Pride	“Our craftsmanship here in Dezhou hasn't lost its touch!“ (Comment C811)
		C3-2. Ethnic Affiliation	
		C3-3. Awareness of Skill Inheritance	“This is the spirit of tradition“. (Interview 8)

Conclusion

This study examined the issue of authenticity in ICH within a platformised context through a systematic review, bibliometric analysis, and qualitative case studies. The research demonstrates that the focus on authenticity has shifted from initial material protection and historical continuity to a broader understanding encompassing platform visibility, audience perception, and digital experience. By proposing the PAF, this study models authenticity as an interrelated generative process comprising the stages of being displayed, being perceived, and being experienced, each linked directly to the cultural, economic, and social dimensions of digital sustainability.

Through the case of Dezhou Black Pottery on Douyin, the study examined how inheritors, content creators, and ordinary users collectively shape the authenticity chain. The results indicate that while heritage can remain visible on the internet, mere visibility is insufficient; the preservation of

cultural essence and the establishment of credibility within platform systems are the true drivers of digital sustainability.

The study acknowledges several limitations. The bibliometric analysis relied solely on Scopus, which may have omitted regional or non-English research findings. Furthermore, the empirical validation was limited to a single Chinese case study on the Douyin platform, affecting the generalisability of the findings to different cultural or platform contexts. Future research should incorporate comparative cases across regions and platforms to extend the understanding of platformised authenticity mechanisms.

In summary, when ICH enters a platformised environment, authenticity ceases to be a simple dichotomy between preservation and commercialisation. Instead, it becomes a dynamic, multi-stakeholder generative process. By integrating bibliometrics with qualitative validation, this paper establishes a theoretical foundation for exploring sustainable pathways for cultural dissemination within digital ecosystems.

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