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PAPER

The Impact of Mobile Interactive AIGC's Innovative Narratives of Intangible Cultural Heritage Texts on Usage Intention

Pingting Mao[1–4], Lulu Hao[5](✉), Wenzhao Hu[2], Chen Fan[6], Yajun Chen[7]

[1]Wuchang College of Technology, Wuhan, China

[2]Seokyeong University, Seoul, South Korea

[3]Seoul University of Foreign Studies, Seoul, South Korea

[4]Turon University, Karshi, Uzbekistan

[5]Wuhan Business University, Wuhan, China

[6]Nanjing University of Finance & Economics, Nanjing, China

[7]Yangzhou University, Yangzhou, China

haolulu8870@126.com

ABSTRACT

Mobile interactive artificial intelligence-generated content (AIGC) shows growing potential for innovating intangible cultural heritage (ICH) texts, yet the intention to use such technology, a central concern, has not received sufficient scholarly attention. Based on narrative transportation theory, this study examines how users' psychological transportation experiences shape their intention to use mobile interactive AIGC when participating in the innovative narration of ICH texts, with the aim of providing empirical evidence for the intelligent transmission of ICH texts. Using DeepSeek on mobile devices, the study generated a new narrative of the legend of the white snake told from Fahai's first-person narrative perspective, and participants read and experienced the text through real-time interaction with DeepSeek. A total of 256 valid questionnaires were collected through the Questionnaire Star platform to evaluate respondents' transportation experiences in the innovative narrative text and their intention to use mobile interactive AIGC. The results show that narrative understanding, attentional focus, affective engagement, and narrative presence all positively influence users' intention to use mobile interactive AIGC for innovative purposes. Among these dimensions, narrative presence exerts a relatively weaker effect, mainly because AI lacks the embodied experience of human beings, which results in insufficient density of sensory description. This study extends the applicability of narrative transportation theory to ICH text innovation in the field of AI generation in the mobile interactive context.

KEYWORDS

mobile interaction, mobile interactive artificial intelligence (AI), AI-generated content (AIGC), narrative transportation theory, intangible cultural heritage (ICH), text narrative, folk literature

1 INTRODUCTION

In recent years, AI-generated content (AIGC) has become closely connected with the fields of art and culture, embodying the growing diversity of intelligent art creation and the popularization of the creative subject, and providing conditions for the

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inheritance and innovation of intangible cultural heritage (ICH). Notably, with the spread of mobile intelligent terminals and the improvement of large language models, artificial intelligence (AI) has moved from the desktop to the mobile end, giving rise to a content service form characterized by greater immediacy, personalization, and interactivity. Users only need smartphone-based AI applications, such as DeepSeek, ERNIE Bot, and ChatGPT, to conduct interactive creation anytime by entering prompts, adjusting instructions, and iteratively revising outputs. This mobile interactive AIGC not only lowers the threshold of creation but also reshapes the relationship between users and the content they create. As an assistive tool, it enhances the creativity of ICH inheritors and brings new opportunities for optimizing their works. For example, the Beijing Municipal Bureau of Culture and Tourism launched the "ICH Digital Human" project together with Volcano Engine during the 2025 Beijing International Intangible Cultural Heritage Week. Relying on the Doubao large model and the Coze platform, the project designed a virtual character named "Feifei" with multimodal interaction capabilities, deployed intelligent agents on both the Doubao app and Douyin, and set up check-in devices at the event site, thus forming an integrated online-offline communication system. Users can interact with the digital human through the Doubao app or Douyin accounts to learn about ICH knowledge, which shifts the experience from passive viewing to active dialogue. Another example is an Indonesian batik pattern recognition app. Its developers built a mobile batik pattern classification system that integrates a MobileNetV2 image recognition model with a retrieval-augmented generation (RAG) chatbot. When users photograph and scan a batik pattern, the system identifies its category, and provides the pattern's history, philosophical meanings, and cultural background based on users' dialogue with AI. The AI recognition accuracy reached 96.8%, realizing an interactive experience of "seeing is understanding." On the content production side, mobile interactive AIGC efficiently generates digital-native content and advances the digitalization of ICH. In terms of dissemination modes, it offers multiple forms of information presentation, such as interactive collaboration and virtual learning, enabling ICH digital content to transcend the constraints of time and space, thus providing users with entirely new experiences and achieving rapid dissemination. Regarding the promotion and recommendation of ICH, mobile interactive AIGC uses big-data analysis of user profiles to accurately identify users' interests in and demand for ICH, thereby developing customized promotional strategies to achieve precision communication [1]. Mobile interactive AIGC has achieved notable breakthroughs in ICH innovation, but the development of ICH folk literature, such as myths, legends, epics, ballads, and proverbs, remains the weakest link in current research and practice. Unlike other ICH categories, folk literature relies more heavily on inheritors' oral accounts, contexts, and the collective memory of the people. ICH items in the craft category are relatively easy to digitize, but folk literature is a linguistic art whose core lies in narrative, symbolism, and emotion, which are difficult for AIGC to handle. Most references concentrate on ICH research in the visual arts, whereas in-depth research on ICH texts is very scarce.

At present, Chinese ICH folk literature faces a development dilemma attributable to the following factors. First, before the invention of writing, Chinese folk stories were narrative tales handed down orally among the lower classes. After writing was created, some folk stories came to be recorded in written form, but the vast majority continued to circulate among ordinary people through inheritors' oral transmission. Because these oral narrations carry local colloquial and dialectal characteristics, story content is often closely tied to local settings and social customs, so that outsiders can hardly understand or grasp the meaning outside a specific environment. Therefore, transmission can occur only within a certain scope of social life. Second, inheritors

of folk stories are disappearing. The accelerating urbanization has driven large numbers of young and middle-aged people to work away from home year-round, and the resulting rupture in interpersonal relationships has left the pool of inheritors without successors. In addition, the consumption patterns of the market economy have changed established social relationships and lifestyles, thus affecting the overall culture and beliefs. Urbanization has also profoundly influenced the rural landscape and environment, as well as farmers' living conditions and cultural perceptions. Third, the prevalence of Western culture has gradually caused Chinese folk stories to be forgotten. A Baidu search for "Superman," the Hollywood blockbuster, returns more than 23 million results, whereas "Meng Jiangnu," one of the four great traditional folk stories, returns only about 6 million. The researching results of the two stories show a nearly fourfold gap. In addition, Hollywood's film adaptation of Hua Mulan's story of taking her father's place in the army has changed the values of the younger generation, leading to the prevalence of Western individualistic heroism. This study holds that the innovation of ICH texts confronts a systemic dilemma, in which it is not only a matter of aging content but also a challenge facing the entire transmission ecosystem. Nowadays, most innovations in ICH texts remain superficial, and only the creators of a few works truly grasp the spiritual core and transform it into works that meet contemporary aesthetics, emotional demand, and values. For example, the success of the animated film Ne Zha: Birth of the Demon Child is a phenomenal and milestone-like event. It changed the protagonist from rebelling against patriarchal authority to challenging fatalistic prejudices, giving the whole story a fresh theme and arousing emotional resonance with the audience. The film demonstrates how classic cultural genes can be deeply deconstructed and reconstructed in a modern way, and how classic literature can be turned, through re-narration, into a super IP that ignites the market. Therefore, innovation in ICH texts needs to combine the language of the new era and technological means to reactivate the stories and emotions deeply embedded in the nation's memory. The scholar Bai Xumin believes that the innovation of folk literature should carry at least three layers of meaning: 1) the renewal of concepts, realizing the openness and freedom of folk literature; 2) the renewal of methods, finding the interface between folk stories and modern culture; 3) the renewal of perspectives, recognizing the inevitability of temporal transformation and modernization of folk culture. At present, mobile interactive AIGC has already become an important assistant for folk literature creators [2]. First, through natural language processing and machine learning algorithms, AIGC helps users analyze large amounts of text, refine styles, and offer suggestions on plot development and character building. Additionally, it can generate multiple storylines based on the themes or keywords input by users, providing them with new inspiration [3]. Second, AI can improve the quality of work through grammar checking and content optimization, playing an important role in the text-editing stage. AI platforms make personalized modifications according to the preferences of target readers and adjust content dynamically to fit market demands [4]. AIGC predicts how popular a certain type of story will be through data analysis, thereby offering users more goal-oriented creative directions during interaction. Furthermore, combined with virtual reality and augmented reality technologies, it enables authors to construct story worlds during immersion, which indirectly strengthens readers' interactions with the story [5]. Finally, AIGC's rich forms of expression bring brand-new creative experiences to ICH texts and attract more young users to participate in the re-creation of folk literature. According to the 2026 Global AIGC Content Production Industry Research Report, the AI literature creation market will reach USD 15.8 billion worldwide, with a compound annual growth rate as high as 34.2%. Despite the broad market potential for AIGC literature, the field is

still plagued by pain points such as logical gaps in texts, homogenization of long-form narratives, and low adaptability to specialized subdomains.

2 THEORETICAL FOUNDATION AND RESEARCH HYPOTHESES

Current Chinese ICH research places too much emphasis on authenticity and neglects contemporary users' acceptance, but the key to innovation lies in making modern people accept and enjoy ICH. Therefore, evaluation criteria should shift from whether a text matches the original ancient text to whether it can move users, trigger resonance, and encourage dissemination. In addition, greater consideration should be given to whether the original text is activated in users' minds and whether users are attracted by a new narrative world, which reflects the living transmission of ICH. Meanwhile, it is also necessary to consider whether users who read the ICH text develop interest in it, and whether they are willing to learn more, share and spread it, or participate in its creation, so that its social benefits can be achieved. Narrative transportation theory was proposed by the scholar Green in 2000, who defined narrative transportation as a unique psychological process integrating attention, emotions and imagery when users become immersed in a story. As people are transported into a story, the real world becomes hard to reach, and their attention focuses on the story. At the same time, they form almost realistic mental representations of the scenes described and experience strong emotional reactions as the plot develops as if they have completely left the real world and lost themselves in the story world. When people return to reality from the story world, their attitudes, beliefs, and even self-concepts change, sometimes becoming consistent with those in the story [6]. Hence, narrative transportation theory can provide quantifiable indicators, such as understanding, attention, emotion, and presence, for the narrative evaluation of ICH texts. In the research by scholars Busselle and Bilandzic, these four dimensions are defined as follows. (1) Narrative understanding: narrative transportation theory requires users to clearly grasp the story's logic and cultural background, so as to reduce information ambiguity and linguistic uncertainty. Mobile interactive AIGC, for its part, connects the basic logic of the cause, process, and outcome of a large number of stories into a coherent story foundation, and draws on ICH knowledge in its training data to embed elements such as traditional customs and artifacts into the plot in a reasonable way, thereby facilitating users' deep understanding. Both aim to construct a simple, easy-to-understand narrative world, which is the psychological basis for users' comprehension. (2) Attentional focus: narrative transportation theory sustains users' attention by setting up suspense, conflict, and rhythm, enabling them to deeply process textual information. Mobile interactive AIGC imitates the highly engaging narrative rhythms found in big data, adopting common ways such as establishing suspense at the narrative opening, embedding mid-narrative reversals, or directly programming under the creator's instructions to adjust narrative tension and maintain users' attention. Both regard capturing users' attention as the primary technical link for producing psychological effects. (3) Affective engagement: narrative transportation theory holds that the key to changing users' attitudes is to evoke empathy for characters' fates. Mobile interactive AIGC automatically invokes emotional templates, uses narrative modes that trigger specific emotions, and recontextualizes traditional emotions into contexts familiar to modern people, so as to resonate with them. The core of both is to arouse users' emotions and build a connection with the narrative content. (4) Narrative presence: narrative transportation theory requires users to form clear mental imagery and experience an immersive

sense of being there. Mobile interactive AIGC builds a sense of immersion through rich sensory details according to users' prompts or deconstructs and reorganizes ICH symbols to generate new composite imagery. Both aim to build an immersive, concrete narrative world in users' minds.

In summary, this study proposes the following hypotheses:

1. Narrative understanding is the cognitive process by which users grasp the story logic, plot development, history and culture, and character backgrounds of ICH texts generated by mobile interactive AIGC. Users can construct a complete cognitive framework and reduce information uncertainty after they clearly understand the development of the plot in an ICH text and appreciate the integration of ICH elements, symbols, craftsmanship spirit, and innovative context. The clarity and completeness of information significantly affect users' willingness to use mobile interactive AIGC to create innovative narratives of ICH texts [7]. Accordingly, this study proposes Hypothesis H1: users' narrative understanding of AIGC-generated ICH texts significantly and positively affects their willingness to use mobile interactive AIGC for innovation.
2. The degree of users' attentional focus reflects the attractiveness of ICH texts generated by mobile interactive AIGC. Such texts establish suspense at the narrative opening to dispense with lengthy expository background, introduce mid-narrative reversals at narrative points where users are prone to disengage, and densely employ cycles of goal-obstacle-attempt-outcome structures to reduce flat transitional episodes, thereby sustaining users' attentional focus. Psychological research has confirmed that the degree of attentional focus is positively correlated with the effectiveness of information reception, and highly focused attention helps users understand the plot and grasp its intrinsic cultural connotations. Therefore, this study proposes Hypothesis H2: users' attentional focus on mobile interactive AIGC-generated ICH texts significantly and positively affects their willingness to use AIGC for innovation.
3. In 1988, Barry Feig introduced emotion into marketing theory, arguing that establishing connections by touching consumers' emotions serves the purpose of attracting consumers and promoting sales. This study regards affective engagement as the core of narrative transportation. Mobile interactive AIGC-generated ICH texts simulate and trigger human emotional responses through data-driven human models and formulaic narrative techniques, thereby eliciting users' affective engagement. AI does not have emotions, but it can accurately calculate and generate the narrative mode most likely to evoke emotional resonance. By searching the "emotion–plot" association database in massive texts, it identifies the affective orientation in the prompts input by users, finds the optimal emotional expression modules from the database, and finally proposes solutions that conform to the public's affective cognition. Therefore, this study proposes Hypothesis H3: users' affective engagement with mobile interactive AIGC-generated ICH texts significantly and positively affects their willingness to use AIGC for innovation.
4. Mobile interactive AIGC enables users to experience a sense of presence and control as they adjust the story through real-time interaction with AI. In addition, AI can generate high-density sensory descriptions to reduce users' mental-imagery filling efforts. Through affective computing, it invokes required affective vocabulary and lyrical sentence patterns to rapidly stimulate users' emotional resonance. Through database retrieval and cross-domain integration, it also creates novel imagery collages, blurring the boundary between the virtual and the real, giving users an immersive experience and stimulating their desire to

keep reading and interacting with it. Therefore, this study proposes Hypothesis H4: users' narrative presence with mobile interactive AIGC-generated ICH texts significantly and positively affects their willingness to use AIGC for innovation.

3 RESEARCH METHOD DESIGN

3.1 Scale and questionnaire design

This study constructs two parts of the scale: "narrative transportation of mobile interactive AIGC-generated ICH texts" and "usage intention." The former, based on the classic narrative engagement scale, includes four dimensions: narrative understanding, attentional focus, affective engagement, and narrative presence. Usage intention is measured through the following items: (1) "After reading this story, I would like to try using mobile interactive AIGC tools to make similar innovative adaptations of ICH stories"; (2) "After reading this story, I would encourage and recommend my friends to use mobile interactive AIGC tools for similar innovative adaptations of ICH stories"; (3) "After reading this story, I would like to make similar innovative adaptations of other ICH cultures by using mobile interactive AIGC tools." The questionnaire consists of three parts. The first part presents an adapted text of The Legend of the White Snake generated by mobile interactive AIGC and asks respondents to answer questions after they read the five chapters. Yang Hanqing's (2025) study On the Evolution of Fahai's Image: From the Peking Opera "the Legend of the White Snake" to the Drama "the Green Snake" holds that the diverse characteristics and evolution of Fahai's image across different works offer insights into the trajectory of Chinese people's psychological and affective reshaping. Drawing on it, this study uses DeepSeek to redesign the character of Fahai and adopts his first-person narrative perspective to offer an adapted retelling of the original work's core plot. The character is redesigned as follows: Fahai is the incarnation of the concept of rules in the mortal world. He is not a villain but a prophetic tragic hero—the first to see the flaws in the system. He does not hate the white snake but must maintain the operation of the rules. His suffering stems from the incessant tension between his human affective attributes and his institutional duty as a conceptual archetype. The second part aims to measure users' narrative understanding, attentional focus, affective engagement, narrative presence, and usage intention. The third part collects respondents' basic information, including gender, age, and educational level. All constructs are assessed with five-point Likert-type scales. The structure and specific content of the questionnaire were reviewed and refined by several experts from the literature and film industries.

3.2 Data collection and analysis methods

In this study, SPSS 26.0 and AMOS 24.0 are used to analyze questionnaire data and to verify the internal relationship between mobile interactive AIGC's innovative narratives of ICH texts and usage intention, as well as the core mechanisms of the influencing factors. A targeted distribution approach was adopted for the questionnaire survey. The respondents were mainly enthusiasts with some knowledge of ICH who had been exposed to or used mobile interactive AIGC products, so that they could accurately understand the core meaning of innovative narrative and complete the questionnaire based on their own experience. A total of 300 questionnaires were distributed, with 284 collected. To ensure the authenticity and validity of the survey data, explicit criteria for removing invalid questionnaires were established: (1) samples that knew nothing about The Legend of the White Snake were removed; (2) samples

that had never used generative AI were removed; and (3) samples with incomplete responses, obvious logical contradictions, or identical answers across all items were removed. After strict screening, 256 valid questionnaires were obtained, with response and validity rates of 94.67% and 85.33%, respectively.

4 RESULTS

4.1 Demographic analysis

This study obtained 256 valid samples through the questionnaire star platform. The questionnaire included demographic variables such as gender, age, education, place of residence, familiarity with the legend of the white snake, and whether respondents had used mobile interactive generative AI. The descriptive statistics are as follows. (1) In terms of gender, men accounted for 50.4% and women for 49.6%, showing a fairly balanced gender distribution. (2) In terms of age, young and middle-aged groups constituted the majority: respondents aged 19–30 accounted for 28.5%, those aged 31–40 for 29.3%, and those aged 41–50 for 23.4%; respondents aged 18 and below and those aged 51 and above accounted for relatively small proportions. This age distribution confirms the suitability of the sample's age dimension. (3) In terms of education, the educational structure of the sample was reasonable: 31.6% held bachelor's degrees, 23.8% master's degrees, and 14.8% doctoral degrees; respondents with senior high school, secondary vocational school, and vocational high school education accounted for 12.5%, and those with junior college education for 13.3%, while those with junior high school education or below accounted for only 3.9%. Overall, the sample was highly educated, which ensured that respondents could fully understand the questionnaire items and make accurate judgments. (4) In terms of place of residence, respondents were mainly concentrated in the main urban areas of prefecture-level cities and autonomous prefectures (34.8%), towns and county seats (25.0%), and the main urban areas of provincial capitals and municipalities directly under the central government (23.0%), with rural areas accounting for 14.1% and respondents from Hong Kong, Macao, Taiwan, and overseas together accounting for 3.1%. The residential distribution covered regions at different administrative levels, expanding the geographic coverage of the sample and enhancing its data suitability. (5) In terms of familiarity with The Legend of the White Snake, 42.6% of respondents generally understood the core of the story, 34.4% were very familiar with it, and only 23.0% had merely heard of the title. Overall familiarity with the story was at a medium-to-high level, ensuring the validity of the related cultural variables. (6) In terms of the use of mobile interactive generative AI, 58.6% of respondents used it occasionally, 26.2% used it frequently, and only 15.2% had never used it. This distribution reflects the high exposure to and willingness to use mobile interactive AIGC among the target group, which ensured respondents' understanding of and accuracy in answering the relevant items.

4.2 Reliability and validity analysis

The results of the data analysis are as follows. First, the KMO and Bartlett's test of sphericity showed that the overall scale yielded a KMO value of 0.885, greater than 0.7, and the Bartlett's test yielded an approximate chi-square of 2527.096 with $df = 105$ and $p = 0.000 < 0.05$. Thus, the scale passed the significance test and was suitable for further factor analysis. Second, a total of five common factors were extracted, and the five factors accounted for 80.196% of the cumulative variance,

far above the minimum academic standard of 50%. Finally, the rotated component matrix obtained through principal component analysis showed that the factor loadings of the five factors were all above 0.5, meeting the academic standard, and all items loaded on their corresponding dimensions. Therefore, it is reasonable and effective to divide the variables into narrative understanding, attentional focus, affective engagement, narrative presence, and innovative usage intention.

4.3 Confirmatory factor analysis

The model fit indices of the confirmatory factor analysis are as follows. Among the absolute fit indices, $\chi^2/df = 1.786$, RMSEA = 0.056, GFI = 0.935, and AGFI = 0.903; among the incremental fit indices, IFI = 0.975, TLI = 0.967, and CFI = 0.975; among the parsimonious fit indices, PGFI = 0.624, PNFI = 0.720, and PCFI = 0.743. All fit indices meet the requirements of the academic community, indicating that the model fits well. The convergent validity results are as follows: narrative understanding (AVE = 0.695; CR = 0.871), attentional focus (AVE = 0.727; CR = 0.888), affective engagement (AVE = 0.689; CR = 0.869), narrative presence (AVE = 0.642; CR = 0.843), and innovative usage intention (AVE = 0.733; CR = 0.892). The standardized factor loadings of all items fall between 0.5 and 0.95, the composite reliability (CR) values of all variables are greater than 0.7, and the average variance extracted (AVE) values are all greater than 0.5 (refer Table 1).

Table 1. Convergent validity test

Variable	Code	Unstandardized Factor Loading	S.E.	C.R.	t	Standardized Factor Loading	AVE	CR
Narrative Understanding	A1	1.060	0.080	13.218	***	0.769	0.695	0.871
	A2	1.218	0.078	15.684	***	0.931	0.695	0.871
	A3	1.000				0.791	0.695	0.871
Attentional Focus	B1	0.870	0.061	14.278	***	0.772	0.727	0.888
	B2	1.072	0.060	17.777	***	0.948	0.727	0.888
	B3	1.000				0.829	0.727	0.888
Affective Engagement	C1	0.887	0.064	13.777	***	0.793	0.689	0.869
	C2	1.081	0.070	15.424	***	0.883	0.689	0.869
	C3	1.000				0.812	0.689	0.869
Narrative Presence	D1	0.825	0.068	12.092	***	0.730	0.642	0.843
	D2	0.879	0.066	13.259	***	0.808	0.642	0.843
	D3	1.000				0.860	0.642	0.843
Innovative Usage Intention	Y1	1.049	0.063	16.614	***	0.887	0.733	0.892
	Y2	0.895	0.056	16.035	***	0.862	0.733	0.892
	Y3	1.000				0.818	0.733	0.892

Notes: N = 256. *p < 0.05, **p < 0.01, ***p < 0.001.

The convergent validity of this study meets the standard, indicating that the convergent validity of each variable is good. Overall, the scale structure of each variable shows sound convergent validity and is suitable for further analysis. The discriminant validity results are as follows. For the latent variables of narrative understanding,

attentional focus, affective engagement, narrative presence, and innovative usage intention, the numbers on the main diagonal of the correlation matrix are the square roots of the AVE values, and each square root is greater than the correlation coefficients in its corresponding row and column. It demonstrates the high discriminant validity of the scale used. The validity of the scale is sound as both convergent validity and discriminant validity reached the standard (refer to Table 2).

Table 2. Discriminant validity test

Variable	Narrative Understanding	Attentional Focus	Affective Engagement	Narrative Presence	Innovative Use Intention
Narrative Understanding	0.834				
Attentional Focus	0.540***	0.853			
Affective Engagement	0.622***	0.558***	0.830		
Narrative Presence	0.383***	0.402***	0.478***	0.801	
Innovative Usage Intention	0.675***	0.643***	0.713***	0.533***	0.856
AVE	0.695	0.727	0.689	0.642	0.733

Notes: N = 256. *p < 0.05, **p < 0.01, ***p < 0.001.

4.4 Hypothesis testing of the innovative narrative model for mobile interactive AIGC-generated ICH texts

The fit indices of the structural equation model are as follows. Among the absolute fit indices, $\chi^2/df = 1.786$, RMSEA = 0.056, GFI = 0.935, and AGFI = 0.903; among the incremental fit indices, IFI = 0.975, TLI = 0.967, and CFI = 0.975; among the parsimonious fit indices, PGFI = 0.624, PNFI = 0.720, and PCFI = 0.743. All fit indices meet the requirements of scholarship, indicating that the model fits well (refer to Table 3).

Table 3. Fit Indices of the structural equation model

Fit Indices	Index	Evaluation Criterion	Test Result	Judgment
Absolute fit indices	χ^2	–	142.843	–
	df	–	80	–
	χ^2/df	<5	1.786	Acceptable
	RMSEA	<0.08	0.056	Acceptable
	GFI	>0.80	0.935	Acceptable
	AGFI	>0.80	0.903	Acceptable
Incremental fit indices	IFI	>0.90	0.975	Acceptable
	TLI	>0.90	0.967	Acceptable
	CFI	>0.90	0.975	Acceptable
Parsimonious fit indices	PGFI	>0.50	0.624	Acceptable
	PNFI	>0.50	0.720	Acceptable
	PCFI	>0.50	0.743	Acceptable

This study verified the internal relationships among the variables by setting up the basic model of narrative understanding, attentional focus, affective engagement, narrative presence, and innovative usage intention. The analysis found that the R^2 value of users' innovative usage intention was 0.666, indicating that narrative understanding, attentional focus, affective engagement, and narrative presence jointly explained 66.6% of the variance in innovative usage intention. The results showed that all four hypotheses were supported. Users' narrative understanding of AIGC-generated ICH texts significantly and positively affected their willingness to use mobile interactive AIGC for innovation ($\beta = 0.277$, $t = 4.089$, $p = 0.000 < 0.001$), supporting H1. Users' attentional focus on AIGC-generated ICH texts significantly and positively affected their willingness to use mobile interactive AIGC for innovation ($\beta = 0.244$, $t = 3.946$, $p = 0.000 < 0.001$), supporting H2. Users' affective engagement with AIGC-generated ICH texts significantly and positively affected their willingness to use mobile interactive AIGC for innovation ($\beta = 0.320$, $t = 4.334$, $p = 0.000 < 0.001$), supporting H3. Users' narrative presence with AIGC-generated ICH texts significantly and positively affected their willingness to use mobile interactive AIGC for innovation ($\beta = 0.177$, $t = 3.069$, $p = 0.002 < 0.01$), supporting H4 (refer to Table 4).

Table 4. Direct effects test results

Hypothesis	Path	Unstandardized Coefficient	S.E.	C.R.	P	Standardized Coefficient	Result
H1	Narrative Understanding → Innovative Usage Intention	0.362	0.088	4.089	***	0.277	Supported
H2	Attentional Focus → Innovative Usage intention	0.259	0.066	3.946	***	0.244	Supported
H3	Affective Engagement → Innovative Usage Intention	0.366	0.084	4.334	***	0.320	Supported
H4	Narrative Presence → Innovative Usage Intention	0.189	0.062	3.069	0.002	0.177	Supported

Notes: N = 256. *p < 0.05, **p < 0.01, ***p < 0.001.

5 CONCLUSION AND DISCUSSION

5.1 Research findings

This study explored the internal relationship between the innovative narratives of mobile interactive AIGC-generated ICH texts and users' willingness to use mobile interactive AIGC for innovation. The main findings are as follows. First, users' narrative understanding of AIGC-generated ICH texts significantly and positively affects their willingness to use mobile interactive AIGC for innovation. Human text creators mainly rely on subjective cognition, practical experience, and preset frameworks to infer users' interests, preferences, and interpretive approaches, using sentiment analysis of user feedback and statistical inference outcomes as

references, yet they find it difficult to grasp the logic of interactions between users' mental experience and narrative. By contrast, mobile interactive AIGC creation can leverage its intelligence to mine narrative modes and appropriate semantics, and use the logic aligned with users' cognitive thinking and value understanding to create stories that are most likely to trigger emotional resonance with users. A good reading experience gives users a sense of realism that transcends the real world and deepens their understanding of the content. When users find that mobile interactive AIGC and humans can cooperate in creation by drawing on their respective strengths and breaking fixed ways of thinking, thereby achieving deep dialogue, their confidence in using mobile interactive AIGC to innovate ICH texts is greatly enhanced. It promotes more folk stories to enter modern people's minds. Second, users' attentional focus on AIGC-generated ICH texts significantly and positively affects their willingness to use mobile interactive AIGC for innovation. Based on user profiling, AI can capture users' psychological and cognitive patterns and tailor story texts to individuals. In previous creation, when a story reached a specific user, different users' embodied experiences were influenced by their psychological factors, thus producing different attitude changes and value identification. Attentional focus, rational cognition, and the mobilization of emotional resources are necessary conditions for users to interpret a story positively. Therefore, narrative logic needs to fit users' personality traits, thinking patterns, and affective mechanisms. When users realize that AI can mine psychological discrepancies from their comprehensive profiles and can not only leverage these discrepancies to generate and recommend narrative content aligned with user preferences but also optimize narrative logic based on deep-seated heterogeneous psychological factors to capture their attention, they will develop greater interest in innovating ICH texts via mobile interactive AIGC. Third, users' affective engagement with AIGC-generated ICH texts significantly and positively affects their willingness to use mobile interactive AIGC for innovation. After multiple stages of intelligent evolution, AI can transcend the contextual limitations of culture and help humans create stories that resonate more strongly with readers. With massive ready-made texts as training data, it forms automatic generation models of narrative texts through algorithmic pattern learning and self-iteration. This is similar to a microcosm of the creator's mental model. The construction of the model requires discourse deconstruction and feature mining of high-quality stories to identify and extract the symbols and narrative techniques that resonate with users. Intelligent algorithms establish logical associations between the signals that arouse users' affective engagement and the corresponding user feedback, thereby establishing high-quality narrative templates. Based on a given theme, they automatically produce story materials that are more affectively acceptable and understandable to users. When users realize that AIGC-created texts more easily evoke emotional resonance, they become more motivated to use mobile interactive AIGC to innovate ICH texts. Fourth, users' narrative presence with respect to AIGC-generated ICH texts significantly and positively affects their willingness to use mobile interactive AIGC for innovation. Fed with massive amounts of real data, AI has evolved into a new network agent coexisting with users, and the presence-based interaction it creates lays a foundation for stories to strike a chord with readers. AI is a virtual intelligent agent with in-built cognitive logic and externally driven behavior that can semi-autonomously or even autonomously imitate real users in communication. It can extract behavioral features from human data, learn human psychological-cognitive schemas and behavioral decision-making logic, and respond appropriately to other users' behaviors in actual operation, giving users an immersive experience

of shared resonance. Moreover, users find that AI can also serve as a sensory intermediary to capture users' opinions and emotions from real-time interaction, analyze their thinking logic and psychological schemas, and select appropriate content to convey affective connectedness to users, thereby enhancing perceived warmth and enjoyment in presence-based interaction. Thus, users are more motivated to innovate ICH texts. However, narrative presence is relatively weaker than other dimensions. This is largely because AI lacks embodied experience and genuine bodily perceptions. Accordingly, its textual representations of sensory sensations suffer from insufficient multisensory richness. Second, AI's reliance on statistical probability tends to exclude some low frequency but important sensory details, whereas narrative presence requires textual expression that does not advance the plot. Finally, during model training, AI is instructed to avoid overly concrete, private, and highly embodied descriptions and tends to produce sanitized, disembodied textual outputs. This contributes to a lack of sensory warmth in texts generated by mobile interactive AIGC systems, which further weakens the narrative presence dimension.

5.2 Limitations and future research

The innovative narrative strategies of ICH texts need to be diversified, as different narrative strategies may have different effects on the four dimensions of narrative transportation. For example, when rendering narrative presence in AIGC-generated heritage texts, users may interact with the AI and explicitly prompt it to activate five senses and employ synesthetic rhetoric. It is also feasible to compel the model to reframe characters from acting agents into bodily subjects or deliberately embed redundant plot elements to slow down narrative progression. Finally, users could use their embodied experience to polish all sensory details generated by AI. Future research should conduct comparative studies on the differential effects of different narrative strategies on usage intention.

Most existing studies on the effects of narrative transportation assume that user groups are homogeneous. However, individual transportation into narratives may be affected by multiple factors, including transportability, skepticism, cognitive effort, volition, capability, motivational states, users' proficiency in mobile interactive AIGC, their cognitive level regarding intangible-cultural-heritage texts, and attitudes toward specific narrative contexts. Empirical research on most of these influencing factors remains scarce [8]. Future research can focus on different user groups, distinguishing users of different genders, professions, occupations, and ages, so as to break through the presupposition of homogeneous users and explore segmented narrative strategies in the innovative narratives of mobile interactive AIGC-generated ICH texts.

Most existing studies directly analyze the influence of narrative transportation on users' behavioral intentions. However, measurements in this study reveal that narrative transportation does not necessarily directly foster users' behavioral intention to use; instead, such an effect is realized through several mediating variables. For example, after reading AIGC innovative narrative texts, users may be influenced by cultural identity, which is then transformed into intention for innovative use. Future research should focus on the chain-mediated effect of "narrative transportation–cultural identity–usage intention" to refine the exploration of the transformation path from users' psychological process to behavioral intention.

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7 AUTHORS

Pingting Mao is with the Wuchang College of Technology, Wuhan, China; Seokyeong University, Seoul, South Korea; Seoul University of Foreign Studies, Seoul, South Korea; Postdoctoral Department, Turon University, Karshi, Uzbekistan (E-mail: wanzhuhongxiu1989@gmail.com).

Lulu Hao is with the Culture and Tourism Industry Research Center, Wuhan Business University, Wuhan, China (E-mail: haolulu8870@126.com).

Wenzhao Hu is with the Seokyeong University, Seoul, South Korea.

Chen Fan is with the Nanjing University of Finance & Economics, Nanjing, China.

Yajun Chen is with the College of Environmental Science and Engineering, Yangzhou University, Yangzhou, China.