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Modeling the temporal sequence of intangible cultural heritage dissemination behavior using a situational cognitive framework

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Abstract This paper collects and organizes domestic and international literature, and based on theoretical research related to the situational cognition perspective, analyzes the dissemination patterns of intangible cultural heritage (ICH) short videos. Using structural equation modeling, it explores the influence of factors such as the credibility of disseminators, content stimulation, information sources, viewing contexts, cognitive effects, emotional effects, and intention effects on the dissemination effectiveness of ICH culture, thereby proposing corresponding ICH cultural dissemination strategies. The results show that the credibility of the disseminator, content stimulation, viewing context, and information source positively influence emotional effects and intention effects, with emotional effects mediating the influence on intention effects. Cognitive effects also indirectly influence intention effects. Two optimization strategies for the dissemination of intangible cultural heritage are proposed: enhancing the credibility of the disseminator and expanding the uniqueness of short video content.

Index Terms structural equation model, situational cognition, intangible cultural heritage, dissemination effectiveness

I. Introduction

Intangible cultural heritage serves as a distinctive emblem of ethnic culture and a brilliant crystallization of human wisdom. Its historical depth, educational inspiration, and heritage value are immeasurable, making it an important window into the unique characteristics and cultural heritage of various ethnic groups and regions [1]-[3]. China's intangible cultural heritage originates from a profound agricultural civilization, and its transmission primarily relies on the oral and practical teachings of master-apprentice relationships and contextual practices. These “living” traditional cultural elements are particularly precious yet exceptionally fragile in today's society. In the current era, to deepen the cultivation of humanistic spirit and enhance the core competitiveness of national cultural soft power, society at large is increasingly emphasizing the effective transmission and widespread dissemination of intangible cultural heritage. On one hand, differentiated transmission and development pathways such as craftsmanship inheritance, living evolution, and work authorization will help countless intangible cultural heritage elements find the optimal solution for market monetization [4], [5]. On the other hand, the innovative inheritance and development of intangible cultural heritage also helps to uncover the endless vitality of China's excellent traditional culture, assist Chinese culture in finding a clear positioning in overseas cultural exchanges and mutual learning, and promote the dissemination of Chinese culture abroad [6]-[8].

In the new era, digital technology has enabled intangible cultural heritage to be presented, preserved, and disseminated in new ways [9]. Therefore, ICH information can be digitally processed, and digital technology can be used to simulate the original context of ICH for the construction of ICH dissemination platforms, establishing reasonable and effective research content based on both the cultural and digital technology domains [10], [11]. This will facilitate communication and interaction among the general public, digital technology professionals, cultural and artistic researchers, and ICH project inheritors, enhancing public awareness and recognition of ICH, thereby promoting its protection and inheritance [12], [13]. The situational cognition theory posits that knowledge is context-dependent, and that knowledge and action are interdependent and inseparable. This provides a theoretical basis for integrating information technology with intangible cultural heritage content and applying digital technology in the dissemination of intangible cultural heritage [14]-[17].

Digital display technologies can create highly immersive experiential environments, allowing audiences to feel the charm of intangible cultural heritage firsthand and showcasing the exquisite and unique skills of ICH in a contextualized manner. For example, in intangible cultural heritage exhibitions, holographic projection technology can present representative elements of intangible cultural heritage projects in a three-dimensional form. Reference

[18] designed and tested a holographic projection exhibition stand for the inheritance and dissemination of Guangdong puppet theater cultural heritage, which preserved the traditional roots of puppet theater through 3D models while increasing young people's engagement with cultural heritage through innovative technology. Literature [19] constructed a dynamic holographic display system capable of presenting three-dimensional images of both virtual and real objects, enabling users to engage in real-time, two-way interaction with intangible cultural heritage through comprehensive graphical, audio, and visual data, thereby promoting the dissemination and protection of intangible cultural heritage. The establishment of a digital-intelligent space allows audiences to view related digital information or animated demonstrations while observing tangible intangible cultural heritage artifacts, thereby enhancing the audience's experience. Literature [20] created an intelligent space for cultural heritage experiences, transforming cultural spaces through the application of multifunctional intelligent systems, enabling users to fully enjoy the social, economic, and cultural experiences offered by cultural heritage within the spatial environment. Literature [21] combines the simulation of cultural heritage knowledge management with smart mobile devices, allowing users to explore the virtual world of cultural heritage anytime and anywhere, enhancing user experience while also achieving the inheritance and protection of cultural heritage. Digital dissemination technology primarily utilizes channels such as the internet, social media, and mobile applications to disseminate digitized content of intangible cultural heritage to a broader audience. Literature [22] introduces cultural heritage display and promotion methods based on digital marketing, pointing out that only by providing sufficient appeal to the general public can cultural and historical heritage be timely preserved, maintained, and disseminated. Literature [23] indicates that in the process of cultural heritage digital transformation, diversified media platforms have become important domains for cultural heritage digital dissemination, addressing issues of interpersonal isolation and even temporal-spatial constraints, and reconfiguring the cultural heritage dissemination ecosystem.

The digital intangible cultural heritage dissemination methods based on the situational cognition perspective in the aforementioned studies represent a revolutionary information dissemination approach, overturning the traditional dissemination patterns of intangible cultural heritage and significantly expanding its influence boundaries. Therefore, further research into universally applicable intangible cultural heritage dissemination strategies is necessary to provide new solutions and references for the challenges faced in cultural heritage protection and inheritance.

This paper reviews relevant theoretical materials through literature research, provides a brief overview of theories related to situational cognition, and connects them with the dissemination of intangible cultural heritage. Taking 10,000 short videos related to intangible cultural heritage on the Kuaishou platform as the research object, this paper employs scenario theory to conduct an in-depth analysis of the dissemination patterns of short videos related to intangible cultural heritage on the Kuaishou platform. Subsequently, the study designed a questionnaire survey, conducted reliability testing on the questionnaire data using SPSS 25.0, and employed structural equation modeling to measure the dependent variables influencing the effectiveness of intangible cultural heritage dissemination. Based on this, the study proposes optimization strategies for intangible cultural heritage short videos from a contextual cognition perspective.

II. Basic research on situational cognition theory

A situation refers to the interrelated or combined circumstances of a specific period. It differs from a scenario and is translated into English as “situation,” which refers to the specific social context in which an individual engages in certain activities. It is the specific conditions under which an individual engages in social activities and produces social behavior. In terms of the definition of context, American sociologist Thomas first elaborated on “context” in his book American Farmers in Europe and Poland, arguing that context consists of five parts: objects, occasions, roles, environment, and information. The “Cihai” dictionary defines a situation as a special circumstance that occurs when an individual takes action, which is caused by both the individual themselves and external conditions, and is composed of characters, environment, behavior, time, place, and other factors [24].

In terms of the classification of situations, the results vary depending on the differences in the areas of research and problem-solving among scholars. Cihai divides situations into three types: real situations, imagined situations, and implied situations. Real situations are people or groups that actually appear around a person, imagined situations are people or groups that appear in a person's consciousness, and implied situations are actions of another person that carry a certain symbolic meaning. Toffler defines situations as consisting of five major parts: environment, occasion, role, concept, and information. The MIT Encyclopedia of Cognitive Science classifies situations as physical or task-based, environmental or ecological, and social or interactive. It introduces the concept of “virtual situations,” arguing that situations can be real work scenarios or virtual substitutes for creating situations, such as images and multimedia programs. This view also confirms the current state of technological development in expanding the types of situations. Based on the nature of the context, it is divided into physical

contexts, technological contexts, and social contexts. From the perspective of the subject, it is divided into internal contexts and external contexts, with internal contexts describing the user's own state and external contexts describing the state of the environment. Contexts are further categorized into information contexts, task contexts, physical contexts, and social contexts. From a consumer perspective, contexts are divided into communication contexts, purchasing contexts, and usage contexts.

Scholars from different eras have different starting points for classifying contexts, resulting in varying outcomes. However, all these perspectives hold significant implications for the research and application of context theory in design. Currently, the main perspectives on contexts in domestic design include the following: Tan Hao, based on cognitive psychology principles, proposes that the concept of design contexts includes problem contexts, solution contexts, and contexts. Cheng Wenying categorizes contexts into user contexts, environmental contexts, and task contexts, and further divides the contextual factors influencing users' cognitive needs into external contexts, network contexts, personal contexts, task contexts, and information resource contexts.

In terms of user experience, a context-based prototype design method is proposed, which combines users' actual contextual use of the system to determine the characteristics and constraints of software design and development. The concept of context is proposed to explore the integration of symbolic origins and the formation of conceptual intentions.

Through the definition and classification of context theory, it is found that the social contexts in which users operate are complex and ever-changing. Depending on different design objectives, the classification dimensions and requirements of contexts vary significantly. Therefore, when designing, it is essential to fully consider the contexts in which users operate, particularly the key contextual factors influencing their behavior or decision-making, which can facilitate in-depth optimization of products or interactions.

Today, the rapidly developing cross-media information dissemination environment has brought new opportunities for the digital dissemination of traditional culture. Digital storytelling, particularly technologies such as mobile multimedia and virtual reality (VR), has the potential to simulate and expand the boundaries of sensory experiences. Embodied interactive storytelling, supported by information transmission technologies such as 5G, can utilize “virtual avatars” to achieve embodied interaction between humans and virtual environments, forming a more intimate “technological embodiment” relationship. The embodied nature and interactivity of digital cultural and creative products such as mobile games, digital content, and apps will be significantly enhanced. Technologically embodied digital narratives can adapt, embed, and reshape the human body in different contexts, enabling the narrative dissemination of intangible cultural heritage's tacit knowledge to be associated with a contextual cognitive perspective.

III. Structural equation modeling

In the 1970s, structural equation modeling emerged as a new statistical analysis tool and quickly gained widespread attention in academic circles. This model is highly regarded for its unique analytical capabilities and robust theoretical foundation. Initially referred to as linear structural equation models, it has evolved over time into a complex system encompassing numerous mathematical methods. Since the 1970s, structural equation modeling has been introduced into various fields such as psychology and sociology, and has gradually expanded into research across disciplines including economics, marketing, and education. The structural equation model, also known as the latent variable analysis model, is primarily used to study the relationships between observed variables and latent variables, as well as the extent to which these latent variables influence observed variables. The core of this model lies in its ability to reveal causal relationships between variables and predict and explain observed data through the establishment of theoretical models [25]. Compared to traditional empirical analysis models, the structural equation model has the following distinct characteristics:

(1) Theoretical prior. Variables are determined, relationships between variables are hypothesized, parameters are set, and model correction and parameter estimation steps are conducted based on theoretical foundations. Each step must be grounded in a solid theoretical basis, making structural equation modeling a typical confirmatory statistical method. This methodological approach enables researchers to guide empirical research through theoretical analysis, thereby enhancing the credibility of research outcomes.

(2) Integration of measurement and analysis. Unlike traditional statistical analysis methods, SEM allows researchers to simultaneously handle measurement data and analytical issues. This means researchers can merge the process of measuring data with the process of analyzing data, enabling accurate estimation of latent variables. A major advantage of SEM is its ability to handle variables that cannot be directly observed, such as latent skills, attitudes, and values, which are typically difficult to measure directly.

(3) The central role of covariance. SEM not only analyzes raw data but also conducts an in-depth analysis of the covariance matrix of sample data. The calculation of the covariance matrix is a critical step in the model, as it

provides essential information for subsequent analyses. Additionally, since the covariance matrix must be constructed before analyzing raw data, this step is crucial for the entire model's construction.

(4) Applicability to large sample analyses. Similar to factor analysis, one of the key features of structural equation modeling is its high adaptability to large-scale sample data. As the sample size increases, the stability of the model and the applicability of various statistical measures also improve. This means that when research involves large amounts of data, SEM models can provide more robust analytical results.

(5) Integration of multiple statistical analysis techniques. SEMs ingeniously combine factor analysis and path analysis into a comprehensive model. This integration enhances the model's fit, enabling it to capture structural relationships in the data more comprehensively.

The measurement model is the measurement component of SEMs, consisting of latent variables and their corresponding observed variables, reflecting the relationships between observed variables and latent variables.

The expression is typically as follows:

$$y = \Lambda_y \eta + \varepsilon_y \tag{1}$$

$$x = \Lambda_x \xi + \varepsilon_x \tag{2}$$

In the equation, $y = (y_1, y_2, \cdots, y_p)$ ——vector composed of endogenous observed variables, η — the observed indicator of the endogenous latent variable, $\Lambda_y (p \times m)$ — the factor loading matrix of the endogenous observed variables on the exogenous latent variables, $\varepsilon_y (p \times 1)$ — the residual vector of the endogenous observed variables, $x = (x_1, x_2, \cdots, x_q)$ — a vector composed of exogenous observed variables, ξ — Observable indicators of exogenous latent variables, $\Lambda_x (q \times n)$ — Factor loading matrix of exogenous observable variables on endogenous latent variables, $\varepsilon_r (q \times 1)$ — Residual vector of exogenous observable variables.

Equation (1) reflects the relationship between the vector $y = (y_1, y_2, \cdots, y_p)$ composed of endogenous observed variables and the endogenous latent variable η. Equation (2) is the coefficient matrix of the vector $x = (x_1, x_2, \cdots, x_p)$ and the coefficient matrix. $\varepsilon_y (p \times 1)$ and $\varepsilon_x (q \times 1)$ are the measurement errors of the vector $y = (y_1, y_2, \cdots, y_p)$ and the vector $x = (x_1, x_2, \cdots, x_p)$ composed of exogenous observed variables, respectively.

The structural model primarily reflects the mutual influence between latent variables. The expression is as follows:

$$\eta = B\eta + \Gamma \xi + \zeta \tag{3}$$

Note: B and Γ are both path coefficients, B — reflects the relationship between endogenous latent variables, Γ — reflects the influence of exogenous latent variables on endogenous latent variables, ζ — is the error term of the structural equation.

Formula (3) shows that the path coefficient matrix $B(m \times m)$ of endogenous latent variables, the path coefficient matrix $\Gamma(m \times n)$ of exogenous latent variables, and the error term vector $\xi(m \times l)$ of the structural equation are associated with the vector $\eta = (\eta_1, \eta_2, \cdots, \eta_n)$ and the vector $\xi = (\xi_1, \xi_2, \cdots, \xi_n)$ composed of exogenous latent variables. Here, the matrix $B(m \times m)$ represents the effects of certain endogenous latent variables on other endogenous latent variables, $\Gamma(m \times m)$ represents the effects of exogenous latent variables on endogenous latent variables, and $\zeta(m \times m)$ represents the regression residuals.

IV. The Effectiveness of Intangible Cultural Heritage Promotion in Video Platform Scenario Construction

To address the issues raised in this paper—namely, understanding the overall situation of intangible cultural heritage (ICH) short video dissemination and the challenges it faces—content analysis is employed due to its ability to provide a comprehensive and multidimensional analysis of short video samples. By objectively dissecting sample content across multiple dimensions, this method generates more precise and reliable analytical results, thereby effectively supporting this study's in-depth understanding of the content and dissemination characteristics of ICH short videos. Therefore, this paper employs content analysis, conducting code sampling and categorization analysis of relevant short videos to study the dissemination and performance overview of ICH short videos on the Kuaishou platform.

To present the research subject in a more multidimensional and visual manner, and to compare ICH short videos across short video platforms, the Kuaishou video platform was ultimately selected as the research subject for the following reasons: In terms of quantity, there are a total of 10,000 short videos related to intangible cultural heritage on the Kuaishou platform, with the number increasing year by year. In terms of video publishers, the Kuaishou

platform has a diverse range of publishers of short videos related to intangible cultural heritage, including individual users, media organizations, government agencies, and influential users.

IV. A. Comments on Building Social Presence

One of the social forms adopted in intangible cultural heritage short videos is virtual social interaction, a form of communication that transcends spatial and temporal boundaries.

This type of interaction can achieve significant effects in conveying contextual information. Comments below the video can enhance users' sense of interaction, helping to strengthen viewers' “on-site” experience, and all comments are publicly visible, serving to establish a new sense of identity. Identity recognition encompasses two aspects: individual recognition of one's own identity and recognition of the identity of the group to which one belongs. Individual recognition forms the foundation of group recognition, and the two complement each other, jointly constituting the individual's cognitive process. This can be interpreted from the following two aspects: first, ICH enthusiasts have a strong desire to express themselves and hope to vent their inner emotions and needs through comments. Second, ordinary audiences, after observing the dissemination effects of intangible cultural heritage, tend to post comments and give likes based on the data shown above, while their willingness to collect or share the dissemination effects of intangible cultural heritage is relatively low. The statistical results of likes, comments, and collections are shown in Table 1. As indicated in the table, after statistically calculating the number of likes, collections, comments, and shares for the 562 valid samples obtained from the survey, it can be observed that the standard deviation of each indicator is relatively large, indicating that the data distribution exhibits high dispersion. This indirectly confirms that the Kuaishou platform has successfully built a social environment where users with shared interests in intangible cultural heritage can interact. During video viewing, audiences can engage in real-time responses and in-depth exchanges through mutual comments and the sharing of opinions. Through such real-time interaction, a “recommendation community” centered around creators has formed, effectively fulfilling users' emotional needs for ‘recognition’ and “acceptance.” Additionally, some creators actively respond to fan requests by filming videos according to their expectations. Many intangible cultural heritage creators proactively ask netizens, “What do you want to see? I'll film it.” This helps cultivate deep emotional connections and companionship between creators and fans. The dissemination of intangible cultural heritage provides fans with the freedom to watch at their convenience without disrupting others' viewing experiences, ensuring fans have ample space for sensory perception and emotional engagement. The emotional resonance generated further sparks comment behavior.

Table 1: Statistics of praise, comments and collection

Data index	Thumb up	Comment	Collect
Minimum value	8015	3	4
Maximum value	138476	226394	127450
Mean value	120165	6387	106874
median	38536	1889	3389
Standard deviation	188045	17369	19069

IV. B. Real-time status: Creating a culture of empathy

As shown in Figure 1, the positive word frequency statistics reveal that the top-ranked words in video comments to some extent reflect an enhanced perception of intangible cultural heritage among the audience. On one hand, this indicates that viewers have a high degree of emotional acceptance and empathy toward the dissemination of intangible cultural heritage. In the current internet dissemination landscape, emojis are considered to play a crucial role in conveying key information. These emotion-related words typically carry positive connotations in the text, indicating that the content has a significant promotional and dissemination impact on the audience. The widespread use of such emotive vocabulary not only reflects the audience's emotional response to intangible cultural heritage but also reflects their expectations and aspirations toward it. However, such tones and exclamations also reflect the current limited acceptance and understanding of users regarding the content of intangible cultural heritage dissemination. Based on the results of emotional analysis and the detailed classification of user comments, emotions are categorized into multiple distinct categories, specifically including: expression of personal emotions, manifestation of cultural identity, and provision of participatory supplements. This classification process facilitates a more systematic and in-depth understanding of users' emotional tendencies and provides robust support for subsequent research.

Figure 1: Positive word frequency statistics chart

V. Data analysis and research results

This survey consists of a total of 14 questions, with questions 1–4 being multiple-choice questions, questions 5 and 7 being multiple-selection questions, and questions 6, 8–14 being rating-scale questions. The questionnaire is divided into four sections in terms of content: The first section collects basic information about the respondents, including their gender, age, occupation, experience with watching the dissemination of intangible cultural heritage, and preferences. This section serves as the core guiding part of the survey, using questions 1–7. The second section measures the dependent variables influencing the effectiveness of intangible cultural heritage dissemination, selecting four measurement dimensions: credibility of disseminators, content stimulation, information sources, and viewing context, corresponding to questions 8–11. The third section measures the mediating variables influencing the effectiveness of intangible cultural heritage dissemination, selecting cognitive effects and emotional effects, corresponding to questions 12 and 13. The fourth section measures the effectiveness of short video dissemination, specifically the intended effects, corresponding to question 14.

SPSS 25.0 was used to conduct reliability testing on the questionnaire data. The results showed that the Cronbach's alpha values for all variables were greater than 0.7, with an overall reliability of 0.934, indicating that the variables in this questionnaire survey have good internal consistency. The reliability testing results are shown in Table 2, which is sourced from the output results of the SPSS 25.0 software.

Table 2: Reliability test results

Factor	Cronbach,s a value	Problem number	Scale cronbach,s a value
Communicator's credibility	0.756	3	0.934
Content stimulus	0.833	4	
Information source	0.845	3	
Viewing situation	0.897	5	
Cognitive effect	0.857	4	
Emotional effect	0.862	2	
Intent effect	0.901	6	

The test results showed that the KMO value of the scale was 0.912, greater than 0.7, with a large approximate chi-square value and significance of 0.001. The correlation between the variables was significant, and the sample data was very suitable for factor analysis. (The KMO and Bartlett sphericity test results are shown in Table 3, table source: SPSS 25.0 software output results).

Table 3: Kmo and bartlett ball test results

KMO sampling availability number	0.912	
Bartlett metric test	Approximate card	6345.408
	df	517
	Sig.	0.001

Using principal component analysis, factor analysis yielded a total of seven factors, with all eigenvalues greater than 1, explaining 66.682% of the total variance. After Varimax rotation, it was found that all items had a relatively

large factor loading (greater than 0.5) in each common factor. Items with large factor loadings belonged to the same variable, and there was no cross-factor phenomenon, indicating that the scale had good discriminative power. The results of the factor analysis are shown in Table 4.

Table 4: Analysis of influencing factors

	Estimate	S.E.	C.R.	P	SD	Test result
Cognitive effect -the communicator's credibility	-0.112	0.068	-1.516	0.136	-0.130	Out of reach
Cognitive effect - a content stimulus	0.556	0.086	7.312	***	0.522	Set up
Cognitive effect -information source	-0.016	0.078	-0.223	0.826	-0.025	Out of reach
Cognitive effect -watching situation	0.184	0.089	2.185	0.032	0224	Set up
Emotional effect -the communicator's credibility	0.189	0.078	2.622	0.009	0.214	Set up
Emotional effects - content stimulation	0.330	0.070	4.789	***	0.286	Set up
Emotional effects - source of information	0.170	0.084	2.263	0.035	0.179	Set up
Emotional effects - watch the situation	0.175	0.089	2.008	0.046	0.189	Set up
Intent effect - the communicator's credibility	-0.041	0.063	-0.668	0.514	-0.056	Out of reach
Intent - content stimulation	-0.012	0.078	-0.174	0.879	-0.014	Out of reach
Intent effect - source of information	0.165	0.063	2.784	0.008	0.189	Set up
Intent - watch the situation	0.260	0.074	3.625	***	0.311	Set up
Intent effect - cognitive effect	0.256	0.063	3.925	***	0.230	Set up
Intent effect - emotional effect	0.282	0.063	4.897	***	0.316	Set up

The results of the mediation effect test are shown in Table 5.

Table 5: The mediation effect tests the results

Parameter	Estimate	Lower	Upper	P	Result
Communicator's credibility - cognitive effect - intention effect (standardization)	-0.032	-0.122	0.012	0.158	Out of reach
Communicator's credibility - emotional effect - intention effect (standardization)	0.068	0.005	0.178	0.042	Set up
Content stimulation - cognitive effect - intention effect (standardization)	0.114	0.056	0.217	0.002	Set up
Content stimulation - emotional effect - intention effect (standardization)	0.089	0.036	0.171	0.857	Set up
Information source - cognitive effect - intention effect (standardization)	-0.006	-0.046	0.056	0.857	Out of reach
Information source - emotional effect - intention effect (standardization)	0.056	-0.003	0.156	0.079	Out of reach
Viewing situational - cognitive effect - intention effect (standardization)	0.056	0.005	0.128	0.030	Set up
Viewing situational - emotional effects - intention effect (standardization)	0.059	-0.016	0.154	0.096	Out of reach

The results of the structural equation model fit indices are shown in Table 6. The chi-square value of the structural model is 999.640, with 445 degrees of freedom, yielding a ratio of 2.268. The RMSEA value is 0.063, which falls within an acceptable range, indicating that the structural equation model has been validated overall. Additionally, the goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI), incremental fit index (IFI), and normed fit index (NFI) are generally within the required numerical ranges, indicating that the model fits the data well.

Table 6: The structural equation model fitting the pointer

Statistical inspection quantity	Appropriate standard or threshold	Test data	Model suitability judgment
X2	The smaller the better	999.640	
DF		445	
X2/df	<3.2	2.268	Yes
GFI	>0.9	0.847	
AGFI	>0.9	0.819	
RMSEA	<0.09(unstrict)	0.063	Yes
CFI	>0.9	0.914	Yes
IFI	>0.9	0.912	Yes
NFI	>0.9	0.857	

The structural equation model coefficients are shown in Figure 2.

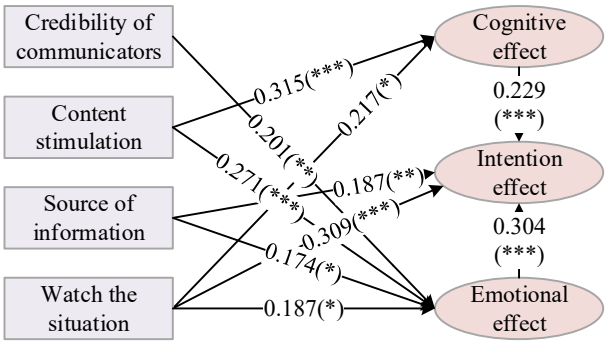

Figure 2: Output diagram of the coefficient of the structural equation model

According to the results of the structural equation model analysis, the credibility of intangible cultural heritage (ICH) dissemination has no significant impact on the cognitive effects of recipients (P=0.135, failing to meet the minimum significance requirement of P<0.05). The credibility of intangible cultural heritage dissemination effects positively and significantly influences recipients' emotional effects (P=0.008, P<0.01, path coefficient 0.201). The credibility of disseminators weakly influences recipients' intention effects through emotional effects (P=0.04, <0.05). The credibility of the disseminator in intangible cultural heritage dissemination does not directly influence the recipient's intention effect (P = 0.514, failing to meet the minimum significance requirement of P < 0.05).

From the results of the structural equation model analysis, it can be seen that the content of intangible cultural heritage dissemination has a positive and highly significant impact on the recipient's cognitive effect (P < 0.001, path coefficient 0.315), and significantly influences the intention effect through the cognitive effect (P = 0.001, < 0.01). The stimulus of intangible cultural heritage dissemination effect content positively and very significantly influences the emotional effect of recipients (P < 0.001, path coefficient 0.271), and significantly influences the intention effect through the emotional effect (P = 0.001, < 0.01). The content stimulus of intangible cultural heritage dissemination does not directly influence the recipients' intention effect (P = 0.878, failing to meet the minimum significance requirement of P < 0.05).

From the results of the structural equation model analysis, it can be seen that the information source of intangible cultural heritage dissemination does not directly influence the recipients' cognitive effect (P = 0.830, failing to meet the minimum significance requirement of P < 0.05). The information source of intangible cultural heritage dissemination has a weak positive influence on the emotional effects of recipients (P = 0.025, <0.05, path coefficient 0.174). The information source of intangible cultural heritage dissemination has a significant positive influence on the intention effects of recipients (P = 0.008, <0.01).

From the results of the structural equation model analysis, it can be seen that the viewing context of intangible cultural heritage dissemination has a positive weak effect on the cognitive effects of recipients (P=0.03, <0.05) and weakly influences the intention effects of recipients through cognitive effects (P=0.030, <0.05). The viewing context of intangible cultural heritage dissemination positively and weakly influences the emotional effects of recipients (P=0.049, <0.05). The viewing context of intangible cultural heritage dissemination positively and very significantly influences the intention effects of recipients (P<0.001).

VI. Optimization of intangible cultural heritage dissemination strategies

Enhancing the credibility of communicators involves the following dimensions: First, tracing the historical development of intangible cultural heritage (ICH) projects, showcasing clear historical milestones and classic representative works to establish a reliable first impression for the audience; second, presenting the everyday transmission activities of ICH, documenting the social activities and living environments of ICH inheritors, showcasing the contemporary relevance of ICH, and amplifying the emotional resonance between the audience and ICH culture. 3. Highlight the uniqueness of intangible cultural heritage projects as they evolve with the times, emphasizing the aesthetic sensibilities, emotions, and capabilities of inheritors in modern adaptations of intangible cultural heritage, thereby enhancing the audience's confidence in the future development trends of intangible cultural heritage projects.

Strategies to enhance the uniqueness of short video content include: 1. Strengthening audience recall of the brand through consistent placement of elements, such as standardizing the size, position, and effects of brand watermarks to create a series of impressions through fixed, repetitive forms. 2. Strengthen narrative logic and

enhance storytelling, creating imaginative blank spaces. Within the parallel structure of the story line depicting the production process of intangible cultural heritage, use cinematographic language and text design to add specific character imagery, narrative scenes, and character relationships, among other content designs. Employ multiple narrative threads to increase content complexity and stimulate audience imagination; III. Coordinate the relationships between content elements such as camera angles, text, and visuals. Take the narrative thread as the main axis and text as the framework to enhance the coordination between camera angles, music, sound effects, and visuals, thereby strengthening the audience's artistic aesthetic perception.

VII. Conclusion

This paper adopts a situational cognitive perspective and employs survey questionnaires and structural equation modeling to examine the relationship between various indicators—including communicator credibility, content stimulation, information source, viewing context, cognitive effects, emotional effects, and intention effects—and the effectiveness of intangible cultural heritage (ICH) dissemination. The study identifies the mapping relationships between these indicators and ICH dissemination outcomes, thereby providing corresponding optimization strategies for dissemination. The results indicate that the credibility of intangible cultural heritage communication and the source of information do not significantly influence the cognitive effects on recipients. However, the content of intangible cultural heritage communication and the viewing context have a positive and highly significant impact on the cognitive effects of recipients. Based on the above research, specific optimization design proposals are put forward.

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