

Research on the Communication of Design Symbols of “The 15th National Games” From the Perspective of Short-Video Platforms

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Abstract: Focusing on the context of short-video platforms, this study takes Stuart Hall’s Encoding/Decoding Theory and the Uses and Gratifications Theory as the core theoretical support, reconstructs the measurement dimensions of “athletic identity” by integrating the Athletic Identity Measurement Scale (AIMS), and constructs a theoretical model of “Athletic Identity → Short-video Symbol Exposure → Decoding Effect”, incorporating regional cultural familiarity and group type as moderating variables. The study defines core concepts: athletic identity includes four dimensions—athletic identity cognition, emotional connection, value identification, and behavioral tendency; short-video symbol exposure focuses on the initiative of exposure, frequency, and interaction depth; decoding effect covers symbol recognition, understanding of translation logic, resonance with sportsmanship, and willingness to interact and disseminate. Through theoretical deduction, hypotheses are proposed: athletic identity positively influences symbol exposure behaviors (e.g., individuals with a strong emotional connection are more proactive in exposure); symbol exposure further enhances the decoding effect (e.g., high-frequency exposure strengthens resonance with sportsmanship); and symbol exposure plays a complete mediating role. Additionally, there are significant moderating differences in the dissemination effect paths between audiences from Guangdong, Hong Kong, and Macao, as well as between ordinary audiences, disabled audiences, and UGC creators.

Keywords: Cultural symbol translation; Athletic identity; Perspective of short-video platforms; Decoding effect

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1. Introduction

Using Hall’s encoding-decoding theory and the uses and gratifications theory as the core analytical framework,

this study introduces the dimension measured by the AIMS scale to create a systematic research approach. Hall's encoding–decoding theory provides a perspective on how organizers of major sports events encode symbolic messages and how audiences decode these messages within diverse social and cultural contexts ^[1]. The Uses and Gratifications Theory emphasizes the active role of audiences in selecting, interpreting, and utilizing media content to satisfy psychological and social needs. The AIMS scale then serves as a quantitative tool to capture the motivational and attitudinal dimensions of audience engagement. Integrating these theoretical and methodological elements, the study examines the sequence “symbolic translation → audience perception → dissemination of sports spirit” ^[2]. In this sequence, symbolic translation is the process by which cultural values and ideological meanings are embedded in visual and discursive symbols. Audience perception is the decoding, appropriation, and subjective reconstruction of these symbols ^[3]. Finally, the dissemination of sports spirit is the broader social diffusion and reinforcement of cultural values through audience participation, resonance, and communication practices. This integrated framework clarifies the dynamic interaction between symbol production and audience reception and reveals how sports events continually regenerate and amplify the spirit of sports in contemporary society.

2. Variable relationships and model logic

The definitions of independent variables, mediating variables, and dependent variables in this study are as follows:

Sporting identity is the independent variable, measured by the dimensions of cognitive recognition, emotional connection, and behavioral commitment on the AIMS scale. Sporting identity reflects audiences' cognitive and emotional habits toward sports and directly shapes their willingness to engage with symbols of the 15th National Games ^[4]. The mediating variable is exposure to short video symbols, defined as audiences' “encountering–browsing–interacting” with modernized symbols on short video platforms. A high sporting identity promotes proactive searching and interaction, whereas a low sporting identity often results in passive and shallow exposure, which affects decoding quality ^[5]. The dependent variable is decoding effectiveness, which is measured by symbol recognition, understanding of traditional elements, resonance with sportsmanship, and willingness to interact and share ^[6]. Audiences with a stronger sporting identity achieve higher-quality decoding via deeper exposure, whereas a weaker identity limits comprehension to superficial recognition. Overall, this framework clarifies the pathway of “sporting identity → short video symbol exposure → decoding effectiveness”, which aligns with the study's theoretical scope and highlights the communication dynamics of short video platforms. Variable definitions and dimensions are illustrated in **Table 1** below:

Table 1. Correspondence table of measurement scale items and theories

Variable type	Variable name	Core dimensions	Theoretical support and theoretical basis
independent variable	Sports Identity	1. Identity Recognition in Sports: Audience self-identification as “participants/followers” after exposure to symbols 2. Emotional Connection to Sports: Positive sentiments like interest and affinity toward sports evoked by symbols 3. Value Alignment with Sports: Degree of alignment with values conveyed by symbols—such as “unity, perseverance, and inclusivity”—embodying the spirit of sports 4. Sports Behavioral Propensity: The willingness to engage in sports activities or disseminate the symbol, stimulated by the symbol.	Specify “Adapted for measuring sports identity using the AIMS scale”, removing the original scale’s “sports participation behavior” items to focus on identity dimensions within the short video context.
Mediating variable	Short Video Symbol Exposure	1. Exposure Initiative: Active search / Passive recommendation (platform algorithm) exposure to symbols 2. Exposure Frequency: Weekly view count of short videos containing symbols (≥ 3 times / < 3 times) 3. Interaction Depth: Degree of participation in comment section discussions post-viewing (e.g., inquiring about symbol translations, sharing interpretations)	“Symbolic Translation — Audience Perception” Dynamic Chain, and “Usage and Gratification Theory”
Dependent variable	Decoding Effect	1. Symbol Recognition: Ability to quickly identify symbols (the emblem “Concentric Fireworks”, mascots “Xiyangyang/Lerongrong”, Guangzhou embroidery patterns) and their traditional origins 2. Translation Understanding: Comprehension of the “modernization of traditional elements” translation logic (e.g., fireworks → modern lines, Lingnan folk customs → cartoon characters) 3. Resonance with Sports Spirit: Emotional connection evoked by symbols to the 15th Games spirit of “vitality, inclusivity, and collaboration”^[7] 4. Interaction and Sharing Intent: Willingness to like/comment on symbol-themed short videos and share them on social platforms for secondary dissemination	“Communication Effectiveness Metrics” + Short Video Feature Supplement, aligning with the practical objective of “Promoting Cultural Integration and Social Inclusion in the Greater Bay Area”
Control variable	Familiarity with regional culture	1. Guangdong Audience: High familiarity with Lingnan traditional elements (firecrackers, Guangzhou embroidery, lion dance) 2. Hong Kong / Macau Audience: Lower familiarity with Lingnan traditional elements, requiring additional cultural annotations	Research Focus on “Cross-Regional Audience Symbol Recognition Differences” and Background Description of the “Complex Cultural Ecosystem Across Guangdong, Hong Kong, and Macao” ^[8]
Control variable	Group Type	1. General Audience: No specific cognitive/emotional requirements 2. Audiences with Disabilities: Stronger emotional resonance with the “Special Olympics” symbol; prioritizes visual accessibility (e.g., color contrast)^[9] 3. UGC Creators: Greater focus on adaptability of symbol translations for dissemination (e.g., audience comprehension)	Research Challenges in Symbolic Inclusive Design for Persons with Disabilities and the Application of Cultural Integration Theory in Amplifying Symbolic Influence through User-Generated Content

Based on the above content, the following hypotheses are proposed:

H1: Sports Identity → Short Video Symbolic Exposure

H2 Short Video Symbol Exposure → Decoding Effect

After revising the “Questionnaire on the Symbolic Communication Effectiveness of the 15th National Games in the Context of Short-Video Platforms”, this study finalized the questionnaire version and explored the mechanisms of symbolic communication and optimization paths.

It was found that sports identity exerts a positive influence on short-video symbol exposure; short-video symbol exposure, acting as a full mediator, significantly enhances decoding effectiveness and audiences’ willingness to participate in and disseminate symbols. Additionally, familiarity with regional culture exerts a moderating effect—specifically, audiences in Guangdong demonstrate better decoding performance than those in Hong Kong and Macau.

3. Conclusion

Based on these findings, the study proposes strengthening practices across three interrelated dimensions. In symbol design, the clarity and readability of symbolic elements must be enhanced while accommodating diverse cultural backgrounds and interpretive habits, ensuring accessibility and inclusiveness^[10]. Regarding communication strategies, optimizing exposure quality and effectiveness is paramount, particularly in stimulating user-generated content (UGC) to transform audiences from passive receivers into active participants and secondary communicators. Regarding audience engagement, differentiated strategies should be adopted to address various demographic and regional needs while reinforcing collective identity and group resonance to foster stronger emotional connections to the spirit of sports. Together, these dimensions form a coherent framework linking symbolic translation to audience perception, ultimately facilitating the broad dissemination and reinforcement of sports values in contemporary society.

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Disclosure statement

The authors declare no conflict of interest.

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