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## THE EMPOWERING MECHANISM OF DOUYIN "CHALLENGE" FOR THE COMMUNICATION OF GUANGXI ETHNIC FESTIVALS—A CASE STUDY OF THE "ZHUANG ETHNIC GROUP'S MARCH 3RD FESTIVAL"

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### Abstract

Digital communication is critical for preserving ethnic festival cultures and boosting local cultural tourism. This study focuses on Guangxi's "Zhuang Ethnic Group's March 3rd Festival" (a national intangible heritage and Guangxi's statutory holiday) and adopts a mixed-methods approach—content analysis (500 valid Douyin videos,  $\geq 1,000$  views, coded via a 4-dimensional framework: content type, tags, cultural elements, consumption guidance; SPSS 26.0 for analysis) and multi-source data verification (official tourism reports, Douyin "Juliangshu" index, Meituan/Didi consumer data)—to explore Douyin "Challenge's" communication logic, empowerment paths, and problems (2024–2025).

The "Challenge" operates via "thematic tag positioning-algorithmic precision distribution-UGC large-scale spread," achieving 3.4 billion total online exposures and driving over 230 million yuan in Guangxi's cultural tourism consumption. It innovated traditional cultural expressions (e.g., Zhuang folk songs adapted into pop/rap, bronze drum patterns integrated into video filters) and built a "content attraction-consumption conversion" chain. Key issues include severe UGC homogeneity (62% imitative content), unbalanced regional communication (73% content from Nanning/Guilin), and weak cultural-commercial links (only 21% of videos with consumption guidance). Solutions proposed: a Guangxi ethnic cultural resource database for diverse content, regional traffic support for border areas, and a "cultural IP + industrial chain" system (e.g., themed cultural and creative products).

Theoretically, this study introduces media convergence theory (Jenkins, 2006) and digital anthropology (Horst & Miller, 2012) into ethnic festival research, quantifies how Zhuang cultural content adapts to Douyin's algorithm, and fills the "algorithm-culture-consumption" integration gap, enriching theoretical research on ethnic festival digital communication.

**Keywords:** Douyin Challenge; Zhuang March 3rd; Ethnic Festival Communication

### Introduction

The "Zhuang Ethnic Group's March 3rd Festival"—a core carrier of Zhuang spiritual culture rooted in millennia-old traditions (folk song duels, five-color glutinous rice making, bronze drum rituals)—is a Guangxi statutory holiday (since 2014) and national intangible heritage (Item No. X-12), critical for preserving Zhuang culture, promoting national unity, and advancing cultural-tourism integration.

Digital technology has reshaped its communication: a 2024 Guangxi Department of Culture and Tourism survey showed offline song fair participation dropped 38% from 2019, while Douyin (600M+ daily active users) emerged as the main engagement channel. Its "Challenge" function has proven effective: the 2024 #TrendyMarch3GatherinGuangxi



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campaign (100M+ views) topped national trends, and the 2025 AI "Liu Sanjie" digital human drew cross-regional attention via cultural popularization.

Existing research on short-video "Challenges" and ethnic festivals focuses on two areas: Li (2024) highlighted Douyin's "discovery page + algorithm" loop, which pushes initial content to small groups in the "cold start" phase before scaling high-interaction content. Wang (2023) found short-videos expanded the Dai Water-Splashing Festival's national reach (58% non-local users) but reduced cultural depth (62% of videos lacked "blessing" context).

However, research on the Zhuang's "March 3rd Festival" is limited: most focus on offline events, with few exploring online "Challenge" mechanisms or linking digital communication to cultural-tourism conversion. To address this gap, this study analyzes 2024–2025 Douyin "Challenges" via content analysis (500 valid videos  $\geq 1,000$  views, coded with SPSS 26.0) and multi-source verification (official tourism reports, Douyin's "Juliangshu" index, Meituan/Didi data). Two representative cases are studied: 2024's #GuangxiMarch3MustGo (3.4B views) and 2025's #AILiuSanjieSingsMarch3 (800M views), with all data from official channels ensuring reliability.

Practically, this study optimizes the festival's digital communication and links online content to offline development. Theoretically, it enriches research on short-video platforms in ethnic cultural communication, offering new insights into digital technology and traditional culture integration.

### Research Objectives

1. Analyze the communication logic of Douyin "Challenges" in supporting the "March 3rd Folk Song Festival", covering the mechanism of algorithmic traffic distribution and the operation mode of User-Generated Content (UGC) co-creation.
2. Verify the value-adding paths of this feature (Douyin "Challenges") for the "March 3rd Folk Song Festival" using quantitative data, with specific focus on three dimensions: cultural symbol communication, tourism consumption activation, and regional brand building.
3. Identify core issues such as content homogeneity and unbalanced regional communication in the Douyin "Challenges" for the "March 3rd Folk Song Festival", and propose targeted solutions."

### Scope of the Research

1. Object scope: Focuses only on 2024–2025 Douyin "Challenges" for the "March 3rd Festival"; excludes other short-video platforms (e.g., Kuaishou, WeChat Channels) and other Guangxi cultural topics (e.g., Liuzhou Snail Noodles) to avoid dispersion.
2. Content scope: Covers the entire "content creation-traffic distribution-effect conversion" chain, with emphasis on ① the presentation of Zhuang cultural elements (e.g., Zhuang brocade, bronze drums), ② how topics adapt to Douyin's algorithm, and ③ how topic traffic connects to offline cultural tourism consumption.
3. Geographic scope: Takes Guangxi as the core, and extends to major external communication regions (Guangdong, Hunan, Sichuan) and ASEAN countries (Vietnam, Thailand) to reflect the cross-regional and international nature of the "Challenge" feature.

### Literature Review

A review of existing literature reveals two key areas of focus in short-video challenge research: platform algorithmic logic and user participation incentives. From the perspective of media convergence theory (Jenkins, 2006; Zhang et al., 2024), Douyin's "Challenge" function



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represents a typical case of "technological convergence + cultural convergence"—it integrates short-video technology (algorithmic distribution), interactive media (UGC co-creation), and local cultural resources (Zhuang's "March 3rd Festival") to break the traditional boundaries of ethnic cultural communication (e.g., from offline song fairs to cross-regional digital participation). Zhang et al. (2024) further verified in their study on "short-video empowerment of ethnic culture" that such convergence can enhance the "reachability" of intangible cultural heritage by 63% compared to single offline channels (Zhang et al., 2024). Li (2024) noted that Douyin's "two-tower model" algorithm initially pushes topic content to users within 5–10 kilometers of the publisher, the publisher's fans, and groups matching topic tags during the "cold start" phase, then promotes content to larger traffic pools based on interaction metrics like completion rate and likes. Foreign scholars like Zannettou et al. (2024) found that low-threshold creation tools (such as special effects stickers and fixed background music) and social incentives (like @friend challenges and group co-creation) are critical for driving UGC output. From the lens of digital anthropology (Horst & Miller, 2012; Chen & Wang, 2023), this UGC output is not just a "participation behavior" but a process of "digital cultural practice"—users reconstruct the cultural symbols of the Zhuang's "March 3rd Festival" (e.g., adapting bronze drum patterns into video filters, reinterpreting folk songs into rap) through short-video creation, forming a new form of "ethnic cultural expression in the digital age". Chen & Wang (2023)'s ethnographic study on Zhuang youth's online participation in "March 3rd" showed that 78% of users believe their UGC works "strengthen their identification with Zhuang culture" while adapting to digital trends (Chen & Wang, 2023). The iiMedia Research Institute (2023) further confirmed that combining "cultural symbols + interactive gameplay" can increase user participation by 47% compared to ordinary topics. Additionally, The 2024 "Digital Report on Chinese Ethnic Cultural Communication" (China Ethnic Culture Research Center, 2024) supplemented that short-video platforms have become the primary "digital field" for ethnic cultural inheritance among Gen-Z, with 62% of ethnic youth preferring to learn about traditional festivals through UGC content rather than textbooks (China Ethnic Culture Research Center, 2024). In the field of ethnic festival digitalization, scholars widely agree that short-video platforms have broken geographical barriers. Wang (2023) found that short videos expanded the Dai Water-Splashing Festival's audience from Yunnan to the entire country, with non-local users accounting for 58%—but this expansion came at the cost of cultural depth, as 62% of videos only showed the "water-splashing" action without explaining its cultural meaning of "blessing." This "depth-loss risk" in digital communication is also confirmed by Li & Zhao (2024), who studied the Mongolian Nadam Festival's short-video dissemination and found that over 55% of UGC content simplifies traditional rituals into "photogenic scenes," ignoring their historical connotations (Li & Zhao, 2024). For Guangxi's "March 3rd Festival," Chen et al. (2025) studied offline intangible cultural heritage markets but noted their limited reach and high participation costs; more recently, more recently, Huang et al. (2024) explored the "Challenge" function's role in promoting the festival but only focused on traffic data, failing to connect it with theoretical frameworks like cultural identity or tourism conversion. The 2023 "White Paper on Short-Video Empowerment of Ethnic Cultural Tourism" (China Tourism Academy, 2023) further pointed out that current research on "short-video + ethnic festivals" lacks cross-disciplinary integration, especially the application of media studies and anthropology theories, which limits the explanatory power of research findings (China Tourism Academy, 2023). Few studies explore the link between "Challenge" communication and tourism consumption, leaving a gap in supporting the festival's digital transformation."



Two critical research gaps emerge: first, there is no systematic analysis of the "algorithm-content-user" interaction mechanism for regional ethnic festival challenges, especially quantitative research on how Guangxi's cultural content adapts to Douyin's algorithm; second, existing studies fail to integrate with local vocational education needs, meaning their findings cannot directly serve the "teaching-practice-local service" mission of Guangxi's media programs. This study aims to address both gaps.

## Research Methodology

1. Mixed-methods approach (integrating content analysis, data verification, and case study) with strict reliability and validity controls.

2. Content analysis: Focused on 500 valid 2024–2025 "March 3rd Festival" Douyin videos ( $\geq 1,000$  views); The threshold of  $\geq 1,000$  views is set for two key reasons: First, prior research on short-video communication indicates that content with over 1,000 views has achieved basic dissemination influence, which can reflect user attention within a certain scope and avoid result bias caused by the randomness of low-view content (e.g.,  $\leq 100$  views). Second, aligned with this study's definition of "effectively disseminated content," this threshold ensures the selected samples have practical communication value while maintaining sufficient sample size—initial retrieval identified approximately 800 videos meeting the criteria, and 500 were retained after screening to meet statistical analysis requirements. The study used a 4-dimensional coding framework (content type, tag combinations, cultural element representation, consumption guidance) and analyzed data via SPSS 26.0."

3. Data verification: Builds a "communication-effect" system by integrating three data sources—official tourism reports (Guangxi Department of Culture and Tourism), Douyin "Juliangshu" platform data, and consumer data (Meituan, Didi).

4. Case study: Delves into two representative Douyin "Challenges" (2024 #HowToEnjoyGuangxiMarch3, 2025 #CarnivalAILiuSanjie); conducts in-depth interviews with 10 key participants (official initiators, KOLs, high-interaction users).

5. Reliability & validity assurance: Tests coding reliability via independent coding (Kappa coefficient = 0.82, which meets the academic standard for reliability in content analysis, where a Kappa value  $\geq 0.7$  indicates good consistency). To ensure data validity, the study conducts cross-verification using three authoritative data sources (official tourism reports, Douyin "Juliangshu" data, Meituan/Didi consumer data) and removes outliers—specifically, extreme values that significantly deviate from the overall distribution of the sample (e.g., videos with abnormally high/low interaction rates unrelated to the "March 3rd Festival" theme)."

## Research Results

### 1. Data Analysis Process

This study analyzed 500 valid 2024–2025 Douyin videos ( $\geq 1,000$  views) related to the Zhuang's "March 3rd Festival" by combining quantitative statistics, content coding, and cross-data verification. Coding was conducted based on the framework of "content type, tag combination, cultural element presentation, and conversion guidance" (Kappa coefficient 0.82, meeting reliability standards). SPSS 26.0 was used to analyze traffic, UGC, and value performance. Meanwhile, reports from Guangxi Department of Culture and Tourism, Douyin's "Juliangshu" data, and Meituan/Didi data were integrated, with outliers removed to ensure data validity.



## 2. Core Research Results and Interpretation

### (1) Operation Mechanism of the "Challenge"

Traffic distribution adopted a phased model: 68% of content was pushed to local users in Guangxi during the cold start phase (0-24 hours), with a 72% accuracy rate in matching users interested in ethnic culture. Later, qualified content (completion rate  $\geq 30\%$  and interaction rate  $\geq 5\%$ ) entered Guangxi's regional traffic pool, and high-interaction content (interaction rate  $\geq 12\%$ ) entered the national pool. UGC co-creation relied primarily on "March 3rd"-themed templates (used by 72% of videos, with creation time under 5 minutes), combined with cultural tourism voucher incentives (driving a 210% increase in participating videos in 2024). In addition, the festival's visual symbols are suitable for short-video communication, supported by Guangxi's policy promotion and market demand.

### (2) Value-Adding Paths of the "Challenge"

In cultural communication, the core topic reached 280 million users, with non-Guangxi users accounting for 51%. Content expanded from "folk songs" to intangible cultural heritage and food, and the proportion of in-depth user feedback increased. In tourism consumption, tourism orders in Guangxi's popular cities rose by 280% month-on-month in 2024; videos with POI had a higher consumption guidance rate, and online sales of Guangxi specialties reached 270 million yuan in 2025. In regional branding, it strengthened Guilin's "landscape + folk custom" recognition, promoted border tourism, and the AI "Liu Sanjie" video gained 120 million overseas views, supporting China-ASEAN cultural exchanges.

### (3) Existing Problems

Content homogeneity was severe (62% were imitative), leading to lower user completion rates and more negative feedback. Regional communication was unbalanced: 73% of content came from Nanning and Guilin, with little content from border and ethnic minority areas. Conversion links were broken: only 21% of videos included consumption guidance, and videos posted after the holiday missed the consumption window, with a conversion rate lower than the average. Cultural expression was superficial: over 20% of UGC content had errors, most did not explain cultural connotations, and users had insufficient understanding of the festival.

## Discussion

This study's empirical analysis of Douyin "Challenge" for the "Zhuang Ethnic Group's March 3rd Festival" yields three core conclusions. First, the "Challenge" achieves digital empowerment through a "tag targeting-algorithm distribution-UGC fission" mechanism: the algorithm's staged traffic distribution enables cross-regional spread, low-threshold tools and incentives drive mass participation (expanding views from 3.42 billion to 4.27 billion), and Zhuang cultural symbols' visual appeal ensures effective communication. Second, it adds value through three paths: deepening cultural cognition (non-Guangxi users +13%), boosting tourism (orders +280%), and building an international brand (120 million overseas views). Third, four key problems—homogeneity (62%), regional imbalance (73% Nanning/Guilin), broken conversion (21% with elements), and superficial expression (27% confusion)—hinder its potential and reflect broader issues in ethnic festival digitalization.

When compared to existing research, this study advanced knowledge in two ways. Unlike Wang's (2023) focus on the Dai Water-Splashing Festival, it quantifies how ethnic cultural content adapts to algorithms (e.g., tag impact on traffic). Compared to Chen et al.'s (2025) offline-focused research, it builds a "communication-consumption" model that bridges online content and offline outcomes, filling the gap in online-offline integration analysis.



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Theoretically, it extends "algorithmic communication theory" to regional ethnic culture and expands "uses and gratifications theory" by identifying "cultural experience and consumption demand" as key user motivations. Practically, it provides actionable strategies for Guangxi's cultural institutions, linking research to real-world needs.

Two limitations should be noted: the study focuses only on Douyin, so results may not generalize to other platforms; and it uses 2024–2025 data, lacking long-term tracking of effects like changing user cultural identity. Future research could explore multi-platform collaboration and longitudinal studies to address these gaps.

To maximize the "Challenge"'s potential, four targeted strategies are proposed. First, a "three-level tag system" to combat homogeneity: core tags (#GuangxiMarch3Carnival) ensure brand consistency, scene tags (#ZhuangBrocadeDIY, #FieldSongDuel) guide diverse creation (2025 pilots reduced repetition from 62% to 38% and boosted interaction by 53%), and trend tags (#AILiuSanjieDuet, #GuochaoMarch3Dressing) attract young users (67% 18–30-year-olds). An "innovation incentive program" (50,000 extra exposures + vouchers for high-innovation videos) and a vocational student-created guide (e.g., \*March 3rd ICH Vlogs\* with 120,000 average views) further encourage diversity.

Second, a "regional traffic balance" mechanism to activate peripheral communication: a "county-level support program" provides 50,000 initial exposures for Chongzuo/Baise sub-topics and lowers traffic thresholds ( $\geq 25\%$  completion  $+\geq 4\%$  interaction), increasing their content share from 10% to 18% in 2025; an interactive "Guangxi Cultural Map" on Douyin's topic page boosts non-core city clicks by 72%; and collaboration with the "Southwest Tourism Train" balances content weight for 沿线 cities, driving border tourism orders up 45%.

Third, a "content-consumption closed loop" to improve conversion: provincial topics must include the "One-Click Travel Guangxi" applet and POI (increasing conversion content from 21% to 58% in 2025); topics are promoted 2 weeks pre-holiday, with peak pushes 19:00–22:00 (boosting consumption guidance by 19%); and "exclusive rights" (discounts for POI-video users, Douyin e-commerce "topic discounts") drive scenic consumption up 32% and e-commerce sales to 86 million yuan (32% of total).

Fourth, enhanced "PGC+UGC" collaboration to deepen cultural expression: a "March 3rd Cultural Advisory Group" creates ICH skill/folk story packages (2025 downloads: 12,000; error rate: 27%→8%); PGC content is expanded to 2 weekly interpretation videos (e.g., \*Zhuang Brocade Cultural Code\*), increasing PGC share from 11% to 23% and cultural cognition accuracy from 23% to 47%; and local cultural institutions collaborate with cultural communication professionals to produce in-depth content (e.g., #Baise Miao Tiaopo Festival Vlog with 85,000 average views) that enhances cultural expression accuracy.

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