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**What Are the Strong Content Influencing Factors of Chinese Local Government Using Douyin (Tiktok) Platform to Promote Culture and Tourism Resources? A Study on the Account "Hebei Culture and Tourism"**

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**ABSTRACT:** Due to the flourishing development of OVPs like Douyin, the short video is an important channel of government cultural-tourism promotion all over the world. This paper explores the Chinese local government official Douyin account "Hebei Culture and Tourism" , and analyzes the high content influence factors which decide the power of diffusion of local cultural- tourist Douyin short videos in China using content analysis method. This research is the first one to discover that there are factors in dissemination skill factors, narrative factors and audiovisual factors that make an impact on the dissemination power of Douyin short videos. These effective factors are the strong content affecting factors for China's local cultural-tourism Douyin short videos. Through the above analysis, our article suggests that, to be appealing and worthwhile at the same time, local government cultural-tourism short videos should be pragmatic and fashionable, include interactive and participatory elements when presenting them, and arrange playlists of videos with a careful choice to form a consistent topic and expand the overall dissemination.

**KEYWORDS:** Chinese local government; short videos; TikTok; tourism; content creation; communication capacity

## **Introduction**

With the rapid development of the Internet and the widespread use of smart phones, short videos have gradually become the first choice for online video users. By December 2024, the number of mobile Internet users in China reaches 1.105 billion, and 99.7% of Internet users use mobile phones to access the Internet. The number of online video users in China reached 1.07 billion (accounting for 96.6% of the total Internet users). Among them, the number of short video users reached 1.04 billion, accounting for 93.8% of the total Internet users (China Internet Network Information Center,2025). In March 2024, the year-on-year increase in the duration of Douyin users accounted for more than half of the online video industry (China Internet Information Center, 2024), and user stickiness continued to increase, ranking first in the industry.

"Hebei Culture and Tourism" is the official Douyin account of Hebei Provincial Department of Culture and Tourism. This study chooses it as the analysis object based on the following three considerations. First, "Hebei Culture and Tourism" is highly representative of the industry. As of January 31, 2025, the account has received 37.538 million likes, with more than 1.845 million followers, 5,881 videos posted in total, and an average daily update volume of 20-30. It has been ranked top three many times in the provincial cultural and tourism government affairs Douyin account communication index ranking released by the Cultural Tourism Industry Index Laboratory in 2024 (China Tourism News Network, 2024). Second, "Hebei Culture and Tourism" has strong new media innovation. The account adopts a "decentralized" content production strategy, actively opens up creative rights, shoots a series of videos based on suggestions from netizens, directly converts user comments into topic sources, "@" Internet celebrities participate in the shooting of city promotional videos. Third, "Hebei Culture and Tourism" reflects the policy orientation of the Chinese government. Hebei Province surrounds China's capital, Beijing. Among all provinces, cities and regions in China, the relevant policies of the Hebei Provincial Government are the most affected and most directly reflect the will of the central government.

Through research, it was found that there is still a gap in the academic community's research on core issues such as the content production mechanism and communication dynamic system of cultural and tourism government short videos; and the relevant content practices of "Hebei Culture and Tourism" provide a vivid practical case for exploring the transformation path of government communication in the new media environment. This study aims to investigate the key factors that affect the communication capacity of the content of the Douyin account "Hebei Culture and Tourism", to provide targeted suggestions for the creation of short video content for similar accounts, and crack the key password of culture-tourism government new media communication.

## **Basis**

### **Culture -Tourism Government Affairs Short Videos**

The use of social media in government is becoming a trend in e-government practice and research around the world (Criado, Sandoval-Almazan & Gil-Garcia, 2013). In the past few years, agencies and departments of the US government (Mergel, 2013) and local governments in the European Union (Bonsón, Torres, Royo et al., 2012) have widely adopted social media applications, while China has also witnessed the booming development of social media in government departments (Lu, Zhang & Fan, 2016). Especially after entering the Web 2.0 era, previously passive web surfers have become active content creators who want to share (Dadashzadeh, 2010), and social media has become an online tool and system designed for and centered on social interaction

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(Hansen, Shneiderman & Smith, 2010). Social media provides a way for users to connect with each other and form communities to socialize, create and share information, or achieve a common goal or interest (Chun, Shulman, Sandoval et al., 2010). By using social media to open up an enterprise dialogue between government and the public (Bonsón, Torres, Royo et al., 2012), it is possible to enhance the social capacity of institutions and departments (McAfee, 2006), enrich interactions with internal and external stakeholders (Dixon, 2010), promote a culture of openness and transparency (Bertot, Jaeger, Munson et al., 2010), and improve government policy making, service delivery, and accountability (Kim, Park & Rho, 2015).

With the rapid development of social media represented by Tiktok, the way people acquire information has gradually shifted to short videos. Short videos refer to a new type of video format with a playback time of no more than 5 minutes, which can be played, shot and edited through mobile smart terminals and can be shared seamlessly in real time on social media platforms (McGrath, Zhao, Qin et al., 2019, as cited in Xu, 2024). The emergence of short videos meets the fragmented reading needs of the public, and also helps the new media of government affairs to find a new way of political communication (Rossa, 2017, as cited in Xu, 2024). More and more government agencies have joined the Tiktok short video platform. Relying on the entertainment and light transmission characteristics of the Tiktok short video platform, they have fully utilized the infectious communication advantages of the short video combination of sound and picture, and realized the fragmentation, focusing and entertainment of government information in the process of communication (Grzybowski & Mianowany, 2018, as cited in Xu, 2024). Compared with the government news release mode in pure text or graphic form, short videos are more timely, more dense, more convenient to browse and more intuitive and easy to understand, and their social interaction experience meets the audience's needs for information selection and self-expression (Nobis, Otárla, Templer et al., 2019, as cited in Xu, 2024). With the vigorous development of new media, it is urgent and necessary for governments at all levels to adapt to the policy propaganda situation in the new era, improve the efficiency of information transmission, optimize the effect of public opinion guidance, and innovate governance models. The Douyin short video platform has the closest cooperative relationship with government departments, and a large number of government departments have set up communication positions on Douyin (Yuan, Lu, Yang et al., 2022, as cited in Xu, 2024).

Culture-tourism short videos belong to a category of government affairs short videos, and are often used in research on how to build a city image, such as city image communication (Zhang, 2023), city image mining (Jingyan Wu & Qianyun Wang, 2021), city symbol expression (Ruohan Wang, 2022), and city brand building (Jinhua Wu & Jianhui Hu, 2021). In China, culture-tourism authorities in many provinces, cities and counties have opened official accounts on Tiktok, and have released short videos related

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to culture and tourism to publicize the characteristics of culture and tourism in the region. There are also researches on how to do a good job in the marketing and communication of culture-tourism Douyin short videos, such as improving the optimization strategy of cultural and tourism short videos (Jinhua Wu & Jianhui Hu, 2021), solving the problems in the operation of cultural and tourism Douyin accounts (Dandan Zhao, 2021), using cultural and tourism short videos to explore the cultural and economic value of poverty-stricken areas (Fangfang Ji, 2020). Some researchers have also conducted surveys on users of culture-tourism videos, and through questionnaires and empirical analysis, they have identified factors that influence users' willingness to travel or continue watching culture and tourism videos (Pei Huang & Dan Tang, 2024). Through the above analysis, it can be found that whether it is the construction of city image, the optimization of marketing communication, or the continuous willingness of users are closely related to the content of culture-tourism communication. As the so-called "content is king", there is an inseparable relationship between the quality of content and the communication capacity.

### **Content and Communication Capacity of Culture-Tourism Short Videos**

Some scholars have also used the notion of "communication capacity" to emphasize that effective communication requires communicators to possess adequate communicative skills (Williamson, 2004). Chinese scholar Zhang Chunhua further demonstrated in his paper "Communication capacity: the definition and Analysis of a concept" that communication capacity is not equal to communication effect, and held that there are four theories in the existing research on communication capacity: the theory of capacity, the theory of effect, the theory of power and the theory of synthesis (Chunhua Zhang, 2011). Li Shaoqiang believes that the communication effect is the sum of all the influences and effects produced by the communication behavior, which can be transformed into the power of persuasion and influence in reality. Therefore, the communication effect can also be regarded as the communication power (Shaoqiang Li, 2016). Yu Guoming believes that communication ability is a kind of soft power and plays an important role in forming the public's emotional identification, identity identification and value identification (Guoming Yu, 2007). Based on the views of the above scholars and combined with the objectives of this study, the communication capacity referred to in this article is an ability that is based on the strength of the communication subject, centered on the communication content, and ultimately reflected through communication effects.

Communication content is an important factor affecting communication capacity. In essence, "content is king" can be used to describe all forms of media. The "content" of media products is the most important factor to attract the audience, and the

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communication capacity comes from the communication content in the final analysis (Chengjia Li, 2008). Feng Chengcheng took video top placement, playlist, video topic, video length, title emotional dimension, video theme, video source, video sound, character appearances, video format, background music, production form, video style, and superimposed recommendation, etc. as independent variables, and divided them into four dimensions: media significance, video content, video form, and platform algorithm; and took the number of playlists, likes, comments, and reposts as dependent variables reflecting the video communication effect index, then conducted data statistical analysis to evaluate the video communication capacity (Chengcheng Feng, 2023). Cheng Yao takes the title, copy, work source, duration, theme type, narrative mode, and background music as the content representation, and the number of video likes, comments, playlist, and forwarding as the effect presentation; then through data sorting and analysis, strategies for optimizing provincial cultural tourism government Douyin short videos are obtained (Yao Cheng, 2023).

In short, in terms of the communication content of culture-tourism short videos, quite a number of scholars have conducted research through dimensions such as video dissemination skills, narrative content, and audio-visual forms; and in the evaluation of the communication capacity of videos, scholars mostly divide the dimensions into the number of likes, the number of comments, the number of shares, etc. However, when these indices representing communication capacity are used as dependent variables, statistical analysis can only be done separately, and there is a lack of a reasonable and authoritative formula to convert the number of likes, comments and shares of short videos into a communication index, so as to comprehensively consider the communication capacity of videos.

### **Content Creation Factors and Theoretical Framework**

Given the above gap, we investigate content creation factors as a key explanatory variable of the dissemination outcomes and refer to three related communication theories for a theoretical justification. Uses and Gratifications (U&G) theory states that the audience is able to make active choices to get media content that provides them with individual needs and wants (Blumler & Katz, 1974). In the case of short videos, this means that short videos attract viewers to content satisfaction on a subjective assessment of their own information needs (e.g., a fun, educational, or inspiring content). The contents match more with the motivations of the target audience – in a word, practical information-related or entertaining-related – would attract more user engagement. Therefore, according to U&G, content features would become crucial in content analytics to predict user engagement, while factors of audiences' motivation to consume (e.g., motivations for travel consumption) will also become essential aspects in content analysis,

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because they are factors that indicate whether the video satisfies the gratifications of the audience and, as a result, will likely spread or not (Huang, Silalahi, & Eunike, 2024).

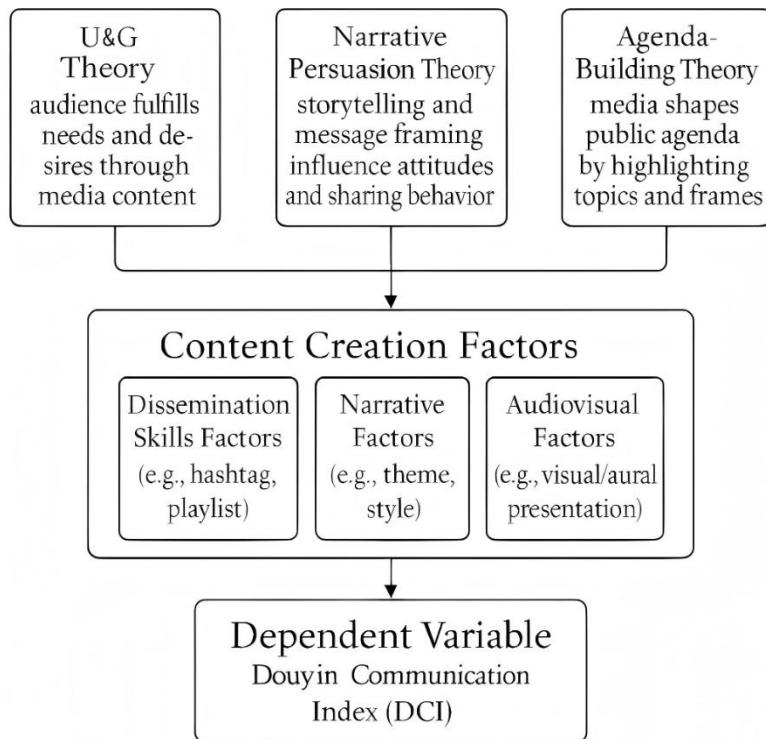
In addition to Narrative Persuasion theory, which gives the theoretical lens for how content's narrative structure and frames influence audience perceptions and shareability, there is the narrative transportation framework which suggests that audiences are more immersed and more persuaded by the narrative world when content is delivered in an engaging story-like frame (Green and Brock 2000). Narrative short videos – such short videos containing topic story lines, emotion touch, or familiar characters – can attract viewers' attention and emotions, and the probability of having viewers responding (like/comment) and sharing can be raised. For us, factors like video topic or title/caption style can be narrative props to attract or repel the audience. The effect of a persuasive narrative style (e.g., the focus sentence) can be seen as the external factor for the audience. And using less formal (or suspenseful) titles may decrease viewers' opposition and lead them to engage, whereas excessive formal or imperative form could reduce narrative immersion and sharing.

Taking the view Agenda-Building theory, governmental media reports aim for public agenda- shaping by rendering certain topics and frames as well-known through their reporting contents (Cobb & Elder, 1971). Whether this agenda-building succeeds or not, however, hinges upon audience uptake. Content effects are at work: short videos put up by the government which suit public interest and trendy items (i.e. could bridge the government's agenda and the public's agenda), enjoy the widespread dissemination more compared to the "official-oriented" and special/one-off activities short video content that can hardly keep the public interest on track and thus has a narrower diffusion. Agenda-building theory therefore makes clear how important it is for that content to be an issue of interest to the public, as an existing cause of news consumption or something relevant to shared culture that might otherwise attract widespread consumption of the government accounts ' messages by driving referrers.

Drawing on this set of theoretical perspectives, we argue that the type of what a government account posts (content topics and information sources), how a government account posts (narrative style and audiovisual presentation), and interactive or structural attributes of the posts (e.g., hashtag or Playlist usage) will all impact their dissemination potential. This study's conceptual model is depicted in Figure 1. The independent variables are a collection of content- related factors organized into three groups, namely dissemination skills factors (e.g., hashtag, playlist), narrative factors (e.g., theme, style) and Audiovisual factors (e.g., visual/aural presentation). The dependent variable is the Douyin Communication Index (DCI) of each short video, indicating the overall performance of a video reaching and engaging the audience. From the theories above, we can say that these content factors should impact DCI of short video. In the next, we explain how to calculate these variables and how to do analysis of relationships.



Figure 1. Conceptual model of how content factors influence the Douyin Communication Index (DCI) of short videos.



## Methodology

### Data Sampling and Content Analysis

The core issue of this study is: What content creation of cultural and tourism short videos will have a significant impact on their communication capacity? Corresponding to this issue, this study mainly adopts content analysis method, sampling method is systematic sampling, and finally selects 482 videos published by relevant accounts from January 1, 2024 to February 27, 2025 (This is the result of a comprehensive consideration of relevant festivals in the Chinese lunar and solar calendars, etc) as content analysis samples.

We developed a coding scheme to capture the presence or value of various content attributes in each video. The selection of these independent variables was guided by prior research and theory. Building on foundational works in social media content analysis (e.g., Nie & Jin, 2017; Jiang et al., 2021; Duan, 2022; Feng, 2023) and the principles of communication studies, semiotics, and visual language theory, we identified three broad dimensions of content factors: (1) dissemination skills factors, (2) narrative factors, and

(3) Audiovisual factors. Within each dimension, specific variables were defined and operationalized for coding. Table 1 below details the independent variables in each category and their coding values.

**Table 1. Content Variables and Coding Scheme for Douyin Short Videos**

Independent Variable Categories	Independent Variable Content	Coding Specifications
Dissemination Skills Factors	Playlists	0 = No; 1 = Yes
	#Hashtag Usage	0 = No; 1 = Yes
	Video Duration	Length of a single video in seconds
Narrative Factors	Theme	0=Current Affairs; 1=Tourism and Scenery Promotion; 2= Cultural Features Promotion; 3=Special Event Promotion; 4=Celebrity Endorsement
	Information Source	0=Other Media and Institutions; 1=Authority; 2=User
	Material Source	0=Repost; 1=Original; 2=Mix
	Title Sentiment Polarity	0=Neutral; 1=Positive; 2=Negative
	Title Style	0=Exclamatory; 1=Declarative; 2=Interrogative; 3=Imperative
	Title Register	0 = Formal Written; 1 = Conversational; 2 = Internet Slang
Audiovisual Factors	Video Orientation	0 = Landscape; 1 = Portrait
	Background Music	0=No Music; 1=TikTok/Douyin Popular Tracks; 2=Other Music
	Narration Form	0=No Narration; 1=Voice-over Narration; 2=Interview-

		based Narration
On-screen Human Presence	0 = No; 1 = Yes	
Inclusion of Illustrations (Charts/Tables)	0 = No; 1 = Yes	
Aerial Shots	0 = No; 1 = Yes	
Time-lapse or High-Speed Photography	0 = No; 1 = Yes	

The two researchers performed the coding after a training period. To guarantee the reliability, we initially coded independently a random subsample of 25% of videos (about 120 videos) and then computed the inter-coders reliability. The Krippendorff's alpha values of all categorical variables were in excess of 0.85, indicating a high reliability and agreement in the coding scheme. Once reliability had been established, the remaining videos were coded, with two coders discussing any confounding cases and coming to agreement on the final codes.

Sample Coding: As a sample, we take a short video from the data: a 14-second original short video with the local environment of the video. It belonged to a playlist series called "Winter Tour in Hebei: Celebrate the Chinese New Year!" (Playlist = 1), and there is the hashtag used in the description of the video (Hashtag Usage = 1). The theme of it belongs to "Tourism and Scenery Promotion" (Theme = 1), and the information source belongs to an official cultural bureau (Authority = 1) and the material source is 100% original shooting (Original = 1). The title of the video "JiJiJiJiJi" was a declarative sentence constructed by prefixing "Ji", the official short name of Hebei Province, to create an internet-style rhythm sentence (Title Style = Declarative (1); Title Register = Internet Slang (2)) and indicating the neutral mood (Title Sentiment Polarity = Neutral (0)). Visually, the video was in landscape orientation (Video Orientation = 2), with no background music applied (No Music = 0). No narration was heard—only a continuous looped rhythmically repeating sound of "JiJiJiJiJi," that would not be a semantic text and therefore not narration (Narration Form = 0). No human character was present on the screen (On-screen human present = 0); only local scenic attractions were shown. The video did not contain any infographics or charts (Illustrations = 0), nor did it use time-lapse or high-speed photography (Time-lapse or High-Speed Photography = 0), but it did feature aerial drone shots (Aerial Shots = 1). This particular video achieved a relatively high level of dissemination performance (as measured by the DCI), which aligned with its rich scenic content and trendy internet style.

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**Dependent Variable: Douyin Communication Index (DCI)**

To measure the DCI. The strength of each video's communication (or dissemination) ability was measured by a metric: Douyin Communication Index (DCI). Within the social media context, the dissemination or communication ability of a video could be represented by the user engagement metrics – the user reaction metrics, e.g., the likes, comments, share (reposts) number. But such values are often highly variable for different videos and could be significantly affected by the viral outliers. Because simply comparing raw levels of engagement can therefore be misleading, a few very popular videos would skew the measures out of proportion. We therefore devised the DCI as an index of the engagement metrics that incorporates measures to adjust for scale differences.

The model of DCI is inspired by the Theoretical Model of the Micro-blog Communication Index (BCI) used to calculate influence on Weibo (the Chinese equivalent of Twitter). The BCI developed by the Qingbo Big Data Platform of China, takes a number of indicators - posts, likes, comments, shares- into account for a calculation of the communicative power of an account. To suit the scenario of Douyin short videos, we modified the strategy on the basis of Jin and Wang (2021), Wang, Pan, Zhu, and Deng (2018) and our previous research (Author, Liang, & Zhang, 2020). When applying DCI, we selected the initial BCI formula and reduced the components that were irrelevant to analysis for a single video as well as retaining the factors that had a clear association with audience viewing behavior. Therefore, our final DCI formula is as below.

$$\text{DCI} = (20\% \times W1 + 80\% \times W2) \times 160,$$

where the sub-index "W1" captures the activity (post count) effect and "W2" captures the engagement effect, defined as:

$$W1 = 100\% \times \ln (X1 + 1)$$

$$W2 = 45\% \times \ln (X2 + 1) + 45\% \times \ln (X3 + 1) + 10\% \times \ln (X4 + 1)$$

In this case, "X1" is the number of posts, "X2" is the number of shares, "X3" is the number of comments, and "X4" is the number of likes. We take the natural logarithm of each count ( + 1 offset to prevent log of zero), to help normalize the data and suppress the extreme values. Such log transformation is an established standard for social media metrics analysis to deal with heavily skewed distribution. That captures the effect of each additional like/comment/share's diminishing marginal effect – for instance, a change from 10 to 110 likes (logarithmic scale from  $\approx 2.4$  to 4.7) contributes a smaller amount to the index compared to the same change from a much higher starting number.

We weight W1 (posting activity) and W2 (engagement outcomes) in the DCI by 20% and 80%, respectively, which is equivalent to what we do in the BCI, but prioritizes audience reactions over the frequency of posts. We consider this a reasonable balance between frequency of posting and the engagement (shares, comments, likes) generated by a post, since if there was indeed an observable difference between audience types, we would want our output to emphasize them when present and not just reward them as a



signal that a post is "popular", even if it did not engage any particular topic. That is, one high-virality video has more contribution to dissemination influence than tons of low-virality posts. The concrete 0.20/0.80 division and the weights distribution in "W2" (45% shares, 45% comments, 10% likes) were first derived from the BCI scheme and afterwards, it was adjusted according to the properties of Douyin. Both shares and comments are weighted more heavily, as Douyin's recommendation algorithm preferentially up-ranks videos that prompt more shares and discussions—e.g. a video with more comments is more likely to be recommended to others' home feeds. Likes: while they are the most prevalent action, their effect on subsequent virality (through algorithmic propagation) is marginal in "W2" (10%) as compared to shares/comments (according to Douyin's own platform logic and similarly as in Weibo's case). Scaling factor 160 in the denominator is a constant multiplying DCI score to narrow it into a convenient scale (this factor is borrowed from BCI convention and doesn't scale the relative comparisons between videos).

We conducted robustness checks to ensure that our results are not sensitive to the specific weights and transformations chosen. For example, we recalculated alternative indices where we (a) adjusted the weight of "W1" vs. "W2" (e.g., using a 10/90 split or 30/70 split) and (b) omitted the logarithmic transformation (using raw counts in a similar weighted formula). In these alternative computations, the rank order of video performance was largely unchanged and the key content variables identified as significant predictors (in the regression analysis described below) remained the same. This gives us confidence that the DCI as defined provides a robust measure of dissemination capacity for the purposes of our study. All DCI values and other continuous variables (such as video duration, which was also log-transformed to correct positive skew) were standardized or appropriately scaled as needed for the regression analysis described next.

### **Data Analysis Approach**

Once the independent variables are coded and DCI can be computed for all the videos, we conducted statistical analyses to identify content factors that significantly contribute to dissemination capacity. For this we use a multiple linear regression analysis in which DCI is the dependent variable and all coded content variables are the independent variables. Since this is an exploratory study (there is still a reasonably high number of potential candidate independent variables), we ran a stepwise regression process to help select which predictors were most influential. Stepwise regression involves adding or removing predictors one at a time according to statistically-oriented rules (in this case we use  $p < .05$  for entry and  $p > .10$  for exiting) to achieve a minimally sufficient model. With this process, we were able to separate a subset of content factors

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whose influence on DCI is independent and thus meaningful, and ignore the ones whose effect is not significant in the presence of other factors.

All the regression assumptions were verified in order to guarantee the analysis validity. We verified multicollinearity between the predictors through the variance inflation factor (VIF) - all the VIF values of the final model are far below 2 (much lower than the common cutoff value of 5), as such, the multicollinearity issue was not found to be a problem. We additionally examined residual plots to ensure homoscedasticity (that is, that the variance of errors does not change over observations), and used normal probability plots to ensure that residuals are approximately normally distributed. The Durbin-Watson statistic for the final model is 1.542, indicating no serious autocorrelation of residuals (and indeed, as the independent cases are different videos, this statistic should not be expected to indicate any serious autocorrelation of residuals either). Taken together, these diagnostics indicate that the regression results can be reasonably interpreted. All statistical analysis was performed using SPSS 26.0 software.

## Results

### Overview of Regression Results

The stepwise multiple regression produced a final model with seven content variables as significant predictors of the dissemination index (DCI). These predictors are distributed across all three of the theoretical factors (dissemination skills, narrative, and Audiovisual). Table 2 provides the regression coefficients and related statistics for the final model. This model explains approximately 17.8% of the variance in DCI (Adjusted  $R^2 = 0.178$ ,  $F = 14.03$ ,  $p < .001$ ), where, small though they are, these values are nonetheless encouraging for behavioral data, due to the multitude of exogenous factors that can affect a video's popularity. Crucially, these remaining predictors are all statistically significant ( $p < 0.05$ ) and provide substantive meaning as to what qualities of content improve, or impede, the communication effect of a video.

**Table 2. Stepwise Regression Results – Effects of Content Factors on Short Video Dissemination (DCI)**

( $N = 482$  videos)

Variable	Unstandardized Coefficient		Standardized Coefficient	t	P	VIF
	B	Standard error	Beta			
(constant)	961.734	21.372		44.999	0	
Dissemination	Playlists	80.308	36.278	0.095	2.214	0.027

Skills Factors							
Narrative Factors	Theme=Special Event Promotion	-198.733	34.211	-0.254	-5.809	0.000	1.118
	Title style=Interrogative	-47.916	24.049	-0.089	-1.992	0.047	1.163
	Title style=Imperative	-84.56	25.966	-0.146	-3.257	0.001	1.181
	Title Register=Conversational	58.017	21.219	0.139	2.734	0.006	1.509
	Title Register=Internet Slang	140.579	26.13	0.264	5.38	0.000	1.409
Audiovisual Factors	Background Music=Other Music	-36.068	17.955	-0.085	-2.009	0.045	1.058
	On-screen Human Presence	-85.987	19.002	-0.194	-4.525	0.000	1.076
R2		0.192					
Adjusted R2		0.178					
F		14.031***					
DW		1.542					
*p<.05, **p<.01, ***p<.001							

As shown in Table 2, one variable from the Dissemination Skills factors entered the model: whether the video was part of a playlist series. Among the narrative factors, the content theme of "Special Event Promotion" emerged with a significant effect (negative), along with two aspects of title text: title style (specifically interrogative and imperative styles, both negative) and title register (conversational and internet slang registers, both positive). From the audiovisual factors, two variables were significant: the use of other (non-popular) background music (negative effect) and on-screen human presence (negative effect). All other content variables we examined (such as hashtag usage, video length, other theme categories like current affairs or scenery promotion, information source, etc.) did not show a statistically significant impact on DCI after controlling for the above factors – they were excluded from the final model by the stepwise selection procedure. In other words, those non-included factors generally do not differentiate high-performing videos from low-performing ones in this dataset.

### Effects of Dissemination Skills Factors

With the dissemination skills factor, play-lists was the only significant ( $\beta= 0.095$ ,  $p < .05$ ) predictor of higher dissemination capacity. Play-listed videos, i.e., videos which



formed part of a playlist or thematic series had the highest positive coefficient ( $B=80.308$ ,  $p < .05$ ), which translates to the results that being part of a playlist is related to a higher DCI on average, as opposed to standing out on its own videos not in series. This is a notable difference given the scale of DCI, implying that playlists can modestly boost a video's reach and engagement..

By contrast, two other dissemination technique variables – use of hashtag and video duration – did not show significant effects in the regression. Our results suggest that hashtag presence alone did not guarantee higher dissemination. It may be that Douyin's search and recommendation algorithms rely less on hashtag compared to organic content discovery, or that the specific hashtag used was not trending enough to matter. Video length (which ranged from very short ~ 10s clips to the platform's longer allowed videos ~15min, with most around 30–60s) also was not a significant linear predictor after log-transformation. This implies that within the typical short video range, small differences in duration did not systematically drive engagement – viewers did not necessarily favor slightly shorter or longer videos in any consistent way, as long as the content was engaging.

### **Effects of Narrative Factors**

The content theme of the video proved to be an important narrative factor, but specifically it was the "Special Event Promotion" theme that stood out – and its effect was negative ( $\beta=-0.254$ ,  $p < .001$ ). In other words, when the videos centered on special event promotions, their overall dissemination performance decreased significantly compared with other narrative themes. In our coding, "Special Event Promotion" refers to videos centered on one-time or short-term events (such as a particular festival celebration, a cultural exhibition, a promotional week, etc.). The regression coefficient for this theme is  $B=-198.733$  ( $p < .001$ ), meaning that if a video's theme was a special event, it tended to have a DCI about 199 points lower than videos on other themes (ceteris paribus). This was the largest magnitude effect among all predictors, indicating a substantially lower dissemination capacity for event-focused videos.

And the variance analysis (Table 3) found that there were significant differences in the communication index of Douyin short videos with different themes ( $F=11.517$ ,  $P < .001$ ); the LSD post hoc analysis showed that the communication index of "Current Affairs" ( $M \approx 1053.09$ ,  $SD \approx 195.90$ ) and "Tourism and Scenery Promotion" ( $M \approx 967.26$ ,  $SD \approx 217.57$ ) was higher than that of "Cultural Features Promotion" ( $M \approx 926.75$ ,  $SD \approx 180.32$ ) and "Special Event Promotion" ( $M \approx 748.42$ ,  $SD \approx 171.04$ ), and the communication index of "Cultural Features Promotion" ( $M \approx 926.75$ ,  $SD \approx 180.32$ ) and "Celebrity Endorsement" ( $M \approx 955.51$ ,  $SD \approx 225.34$ ) was higher than that of "Special Event Promotion" ( $M \approx 748.42$ ,  $SD \approx 171.04$ ).



**Table 3: The difference of communication index of Douyin short videos with different themes**

The me		N	M	SD	F	P	Post Hoc Analysis
	Current Affairs	23	1053.09	195.90404	11.51 7	0.00 0	1=2>3=4 3=5>4
The me	Tourism and Scenery Promotion	206	967.2631	217.56907			
	Cultural Features Promotion	186	926.7454	180.31824			
	Special Event Promotion	37	748.4193	171.04442			
	Celebrity Endorsement	30	955.5057	225.34466			

The paper interpretation of this finding is that one-off event promotions (sometimes they are more related to official, governmental, or institutional events) could be less popular among the crowd than evergreen videos, as it tends to be promotional or related to agendas set by these institutions rather than just pure entertainment on an entertainment-app Douyin. Viewed from an agenda-building perspective, this means that the government's efforts to crowd events on the public agenda through short videos are comparatively ineffectual unless those events are already of interest to the audience. This result may hold a useful application to practice: local government accounts may have greater reach through situating the contents of their events into wider narratives or trending topics, rather than as an item in and of itself.

Regarding text of video titles (or captions), we found both title style and language register of titles influenced video performance significantly. In regard to title style (punctuation, phrasing format), videos with titles being interrogatives (titles posed as questions) and imperatives (commanding or directive phrases) had significantly lower DCI than other title styles. These two title styles came with negative regression coefficients ( $\beta = -0.089$  for interrogative,  $-0.146$  for imperative, both  $p < .05$ ), which is negative. This suggests that, relative to an exclamatory title, phrasing the title as a question or a direct command yields less engagement.

And variance analysis (Table 4) found that there were significant differences in the communication index of Douyin short videos among different "Title Styles" ( $F=5.288$ ,  $P<.01$ ); The LSD post hoc analysis showed that the communication index of "Exclamatory" ( $M\approx976.85$ ,  $SD\approx195.36$ ), "Declarative" ( $M\approx947.59$ ,  $SD\approx211.19$ ), and "Interrogative" ( $M\approx926.30$ ,  $SD\approx191.50$ ) were higher than that of "Imperative" ( $M=860.30$ ,  $SD=225.65$ ).

**Table 4: The difference of communication index of Douyin short videos with different title styles**

Title style		N	M	SD	F	P	Post Hoc Analysis
	Exclamatory	130	976.8511	195.35602	5.288	0.00 1	1=2=3>4
Declarative	190	947.5853	211.19036				
	Interrogative	88	926.2999	191.5012			
Imperative	74	860.3022	225.65429				

Such tendency might be attributed to audience's responses to the narrative hooks. Titles that are exclamatory may elicit excitement or emotionality (with or without an exclamation mark, "Amazing! Check it out! It's a hidden gem!"), and might be evocative of curiosity and interest on the hook, while titles that are imperatives may evoke click-bait titles or be pushy ("You Must Visit This Place."), which might be met with the perception of skepticism or pushiness. Interrogative titles (questions) might not strongly deter viewers but also may be less immediately enticing than a declarative or exclamatory statement of what 's interesting about the video. Interpretations here reflect theories of persuasion: explicit persuasive techniques (imperatives can be construed as attempts at direct persuasion of the viewer) are likely to cause psychological reactance, and subtle appeals that create interest (exclamations about something being exciting) stand a greater chance. Our result aligns with previous findings indicating that most-popular social media posts tend to be stories with feeling and positive focusing, instead of statements and interrogative.

The language register of the title represents another important narrative factor. Regression results show that both "Conversational" ( $\beta = 0.139$ ,  $p < .01$ ) and "Internet Slang" ( $\beta = 0.264$ ,  $p < .001$ ) title registers exert significant positive effects on the communication index of short videos. The ANOVA was significant ( $F = 16.092$ ,  $p < .001$ ). Specifically (Table 5), "Conversational" titles yielded  $B = 58.017$  ( $p < .05$ ), and "Internet Slang" titles yielded  $B = 140.579$  ( $p < .001$ ), indicating higher DCI values relative to the baseline "Formal Written" style.

And the variance analysis (Table 5) found that there were significant differences in the communication index of Douyin short videos with different "Title Register"(F=16.092, P<.001); the LSD post hoc analysis showed that "Internet Slang"(M≈881.37, SD≈183.23) had the highest communication index, followed by "Conversational"(M≈932.78, SD≈197.64), and finally "Formal Written"(M≈ 881.37, SD≈ 183.23).

**Table 5: The difference of communication index of Douyin short videos in different title register**

Title register		N	M	SD	F	P	Post Hoc Analysis
	Formal Written	133	881.3715	183.231 18	16.092	0.00 0	3>2>1
	Conversational	258	932.7789	197.637 05			
	Internet Slang	91	1036.5849	239.089 42			

This finding reiterates the importance of audience communication. It turns the message into a more human one and matches with the language that Douyin's largely youthful audience is enthusiastic about. At the level of U&G, social network users typically favor messages that they can identify with in terms of their and their community's life experience; a serious title may be a turn-off for watching, whereas a humorous or fashionable saying may hook them in. Further, the popularity of online-culture titles succeeds in terms of narrative persuasion theory and the concept of cognitive fluency: They may establish an instant resonance or emotional response (in-jokes, memes or common-catchphrases) that magnetizes the audience.

### Effects of Audiovisual Factors

In the audiovisual factors, we found that background music was a useful predictor of the communication index of short videos. Specifically, the regression results found that the category "Background Music = Other Music" had a significant negative impact (  $\beta = -0.085$ ,  $p < .05$  ) on the performance of short videos by meaning the fact that the use of "Other" music tracks (i.e. music that are not popular tunes popular on Douyin) predicted in a significant way a worse performance for these videos (  $B = -36.068$ ,  $p < .05$  ) compared to the ones that either use no music tracks, or popular music.

And the variance analysis (Table 6) found that there were significant differences in the communication index of Douyin short videos with different "Background Music"(F=6.801, P<.01); the LSD post hoc analysis showed that the communication index of "No Music"(M≈1039.13, SD≈187.06) and "TikTok/Douyin Popular Tracks"(M≈971.09, SD≈222.54) was higher than that of "Other Music"(M≈910.57, SD≈195.54).

**Table 6: The difference of communication index of Douyin short videos with different background music**

Background Music		N	M	SD	F	P	Post Hoc Analysis
	No Music	16	1039.1315	187.0626			
	TikTok/Douyin Popular Tracks	186	971.0935	222.5449			
	Other Music	280	910.5682	195.5386			

This indicates that simply introducing any music into a video may not be as effective in itself; conversely, incorrect/unfamiliar background audio can also reduce a video's viewerability. Occasionally, videos with no music may do well if the ambient noise or spoken parts were interesting, or perhaps for its silence allowing an attentive view of visuals. We hypothesize that trending music videos especially gain from recognition as well as mood induced by a hot song – a viewer maybe already familiar with the song and strongly relates it to current trends (like YouTube trending songs), thus enhancing the video's popularity. Non-trending, unknown music (e.g., filler, transitions) may not enhance content, even degrade viewers' experiences and negatively affect sharing. This may be explained as a cognitive fluency (Reber, Wurtz, & Zimmermann, 2004): the audience finds the familiar music as fluently and in a positive sense which unfamiliar sound does not necessarily offer for an enhanced processing fluency and the emotional experience.

The next important audiovisual variable is the presence of people on screen. Curiously, we found that videos without a human on screen had a significantly higher average spread than those containing at least a human on screen (host or interviewee). In regression coefficients, "On-screen Human Presence" has significant ( $\beta = -0.194$ ,  $p < 0.001$ ) negative impact on the communicated index. In particular, videos marked as "On-screen Human Presence = Yes" had a nonpositive unstandardized coefficient ( $B = -85.987$ ,

p<.001), suggesting that on-screen presence of human individuals was related to a negative change in approximately 86 points in DCI (all other things equal).

And through the independent sample T test (Table 7), it was found that there was a significant difference in the communication index on whether "On-screen Human Presence"(T=3.709, P<.001). The communication index of short videos with "On-screen Human Presence = No"(M≈960.67, SD≈221.31) is higher than that of short videos with "On-screen Human Presence = Yes"(M≈892.53, SD≈171.88).

**Table 7: The difference of communication index of Douyin short videos with or without on-screen human presence**

	On-screen Human Presence	N	M	SD	t	P
DCI	No	323	960.6676	221.30644	3.709	0.000
	Yes	159	892.5343	171.88205		

The counter-intuitive nature of this result may arise because the influence of a human presence is sometimes capable of humanizing or connoting emotional warmth to a video. Nevertheless, in this particular category of video - of scenery and sightseeing promotion — the vast majority of the viewers seemed to prefer a video without on-camera presence that highlighted the scenes of a view, point of interest or cultural artifact. It is also plausible that the appearance of an official, or the guided tour style might render the content more of a formal advertisement of some sort, when the videos without people on them consisted of pure scenery or event clips that simply let the consumer participate in the experience. Alternatively, it is also likely that many of these people-filled videos are of the type we might call "talking head" (i.e., an official person in the video explaining something about the place, or a presenter talking about it in front of a camera) and are therefore perhaps not as engaging as videos of just attractive images set to a background. Under the uses and gratifications theory, viewers seeking visual escapism and aesthetic enjoyment out of travel and culture content might be disrupted by seeing a person (excepting, perhaps, a well-known celebrity or charismatic host); based on the data, visual storytelling that did not entail a narrator's physical presence was apparently more effective for this government account's audience. As noted, this doesn't necessarily imply all human involvement is undesirable—rather, for this account, the most successful videos were those that showcased the destination or cultural element directly.

## Discussion and Implications

Our goal was to identify what content features most significantly impact the reach potential of a local government cultural-tourism account's short videos. Our findings

offer a data-driven grounding of some determinations for effective content selection that positively impact local culture-based marketing video reach and interaction, consistent with the logical framework we espoused. In the next section, we make implications of each of the primary results presented herein within the context of the previous communication theory presented, and take a step towards a grander perspective with an eye to the practitioner and scholar.

### **Theoretical Implications**

In aggregate, these data further confirm the premise that viewers interact with content because of their preference for social media content formats (a Uses and Gratifications approach) and therefore were generally positively engaged with content that was delivered as an appealing, familiar and easy-to-use consumption format (e.g., playlist series, colloquial titles, familiar music), and negatively engaged with content that appeared too professional, temporary, or branded (e.g., official event promotions, rigid language, generic music). This pattern conforms to U&G theory in that viewers seek out content that most likely meets their need for entertainment, social relationship, and knowledge. For example, the success of conversational and slang titles indicates viewers satisfy their cultural-inclusiveness and fun-necessity desires; the success of videos with no human presence suggests viewers satisfy an unmediated visual experience of destinations.

**Narrative Persuasion.** Our study demonstrates that the more tacit narrative components in content have the power to persuade the audience's reaction. The videos with stories implicitly told or painted a rosy picture (e.g., showing location with excitement exclamatory title, or utilizing Playlist to develop a continuous narrative thread) were more persuasive in obtaining viewers' sharing and liking behavior. Conversely, we considered content that arguably resembled a "hard sell" (imperative titles urging action, or strong marketing of an event) to inspire a comparatively lukewarm response, perhaps since these did not transport or entertain the audience's imagination. This agrees with narrative transportation theory (Green & Brock, 2000) – content that facilitates immersion can boost engagement, but content that shatters the narrative flow or comes off as too didactic disrupts that transportation and thus persuasion.

From an agenda-building standpoint, the findings provide an interesting nuance. Government accounts clearly attempt to set agendas by promoting certain messages (e.g., cultural events). However, the low performance of special event videos indicates that a government-driven agenda will not "build" in the public sphere unless it overlaps with what the public organically cares about. In contrast, content themes tied to public interests (scenic beauty, trending topics) fared well, implying that when the official content aligns with audience agenda (or current conversations), dissemination is

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enhanced. This underscores a key agenda-building insight: it's not enough to push information out; the content must be attuned to the audience's existing agenda or it must be presented in a way that captures their interest. The strong negative reaction to imperative titles also reflects that attempts to explicitly direct audience attention can backfire; agenda-setting works better implicitly by making content naturally attractive rather than telling people what to do or think.

In addition, from our point of view, this research makes a theoretical contribution by synthesizing these views within short videos of government communication. It empirically identifies that content aspect has the mediating role connecting the intent of governments' communication with their effects on the audience – functioning as the link between governments' messages and their recipients. It helps close the divide between mostly practice-oriented research around the content of social media communication, and the more general communication theories describing audience behavior. In future studies, we hope that others will continue to validate the influence of the structures and characteristics of government social media cited here for the diffusion of short video messages in general, while also investigating broader theoretical categories like social influence or emotional contagion for these cases.

### **Practical Implications for Government Social Media Strategy**

For practitioners – social media managers of government accounts, especially in tourism and culture – several clear lessons emerge from this research:

**Strategic Use of Playlist:** Curating content in a sequential or narrative Playlist is helpful. Instead of releasing random one-offs, curators should create sequential series (e.g., a series around a celebration of the season) as that helps to guide the viewers through a narrative line (encouraging them to watch more videos), and in doing so creating the implication of dedication to the topic, which might build viewership loyalty. We found strong evidence of an engagement gain in playlist videos, in practice validating this approach.

Such playlist-based video strategies are also adopted by official TikTok accounts for cultural and tourism promotion in other countries, where their communication performance tends to outperform non-playlist videos. For example, the official tourism account of California, USA (@visitcalifornia), has curated six playlists — "Ways to Play" "Drinks + Eats" "Family Fun" "Explore the World in CA" "National Parks" and "State Parks" (see Figure 2). These playlists feature content showcasing California's natural landscapes, urban attractions, and local culture. Similarly, the official tourism account of Germany (@germanytourism) has created playlists such as "Christmas in Germany," "Castles in Germany," among others (see Figure 3), which highlight the country's historical culture, cityscapes, and local events.

Figure 2: Screenshot of the playlist of official tourism accounts of California, USA (@visitcalifornia)

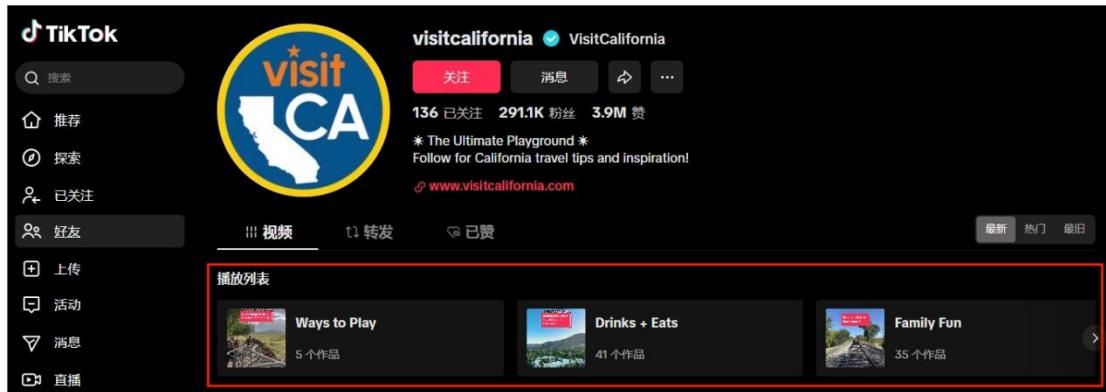


Figure 3: Screenshot of the playlist of official German tourism accounts



(@germanytourism)

**Theme Selection-Focus on Enduring and Audience-Centric Content:** Our research discourages government accounts from extolling their own events and/or campaigns. It appears, our sample suggested, that government account's special-event videos performed poorly, suggesting less interest from the general TikTok audience in the account's internal events. Government accounts ought instead to draw more from permanent, event-based (and interest-based) content.

Indeed, on other countries' cultural-tourism TikTok accounts, "Tourism and Scenery Promotion" videos perform exceptionally well: the official Las Vegas account (@vegas) promotes the city's entertainment, dining, and cultural life—with one Sphere theatre video garnering 1.3 million likes, 5,660 comments, and 81,100 saves (see Figure 4)—while the Los Angeles account (@discoverla) highlights urban culture, art, and landscapes, with an aerial coastal scenery clip receiving 110,000 likes, 2,559 comments, and 125,000 saves (see Figure 5).

Figure 4: Screenshot of a short video from the official tourism account of Las Vegas,

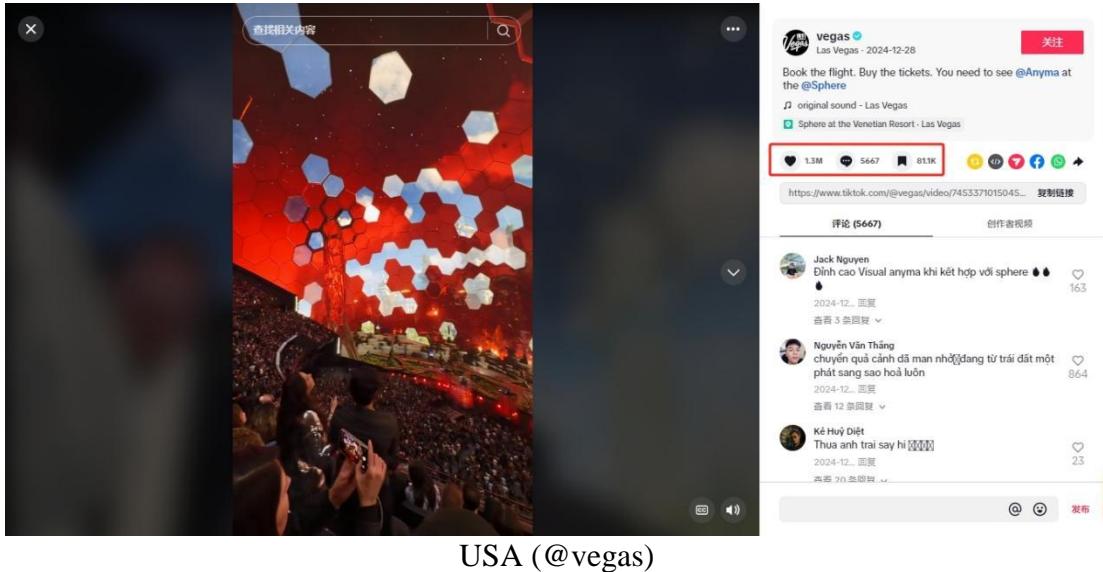
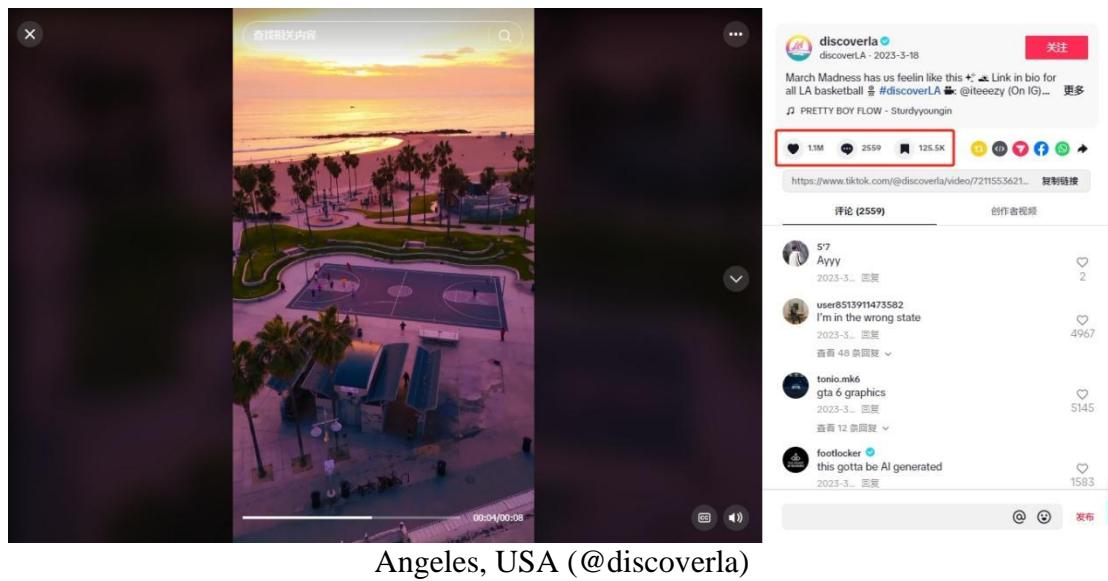


Figure 5: Screenshot of a short video from the official tourism account of Los



**Optimize Titles and Descriptions:** The text attached to a video -title or caption- should be written in an attention-grabbing, reader-friendly style. Government accounts should steer clear of of ficialese, and stick with the colloquial and idiomatic rather than going overboard with language or turning out posts which reflect a government mindset and approach rather than a user-friendly style. A conversational, even humorous or casual

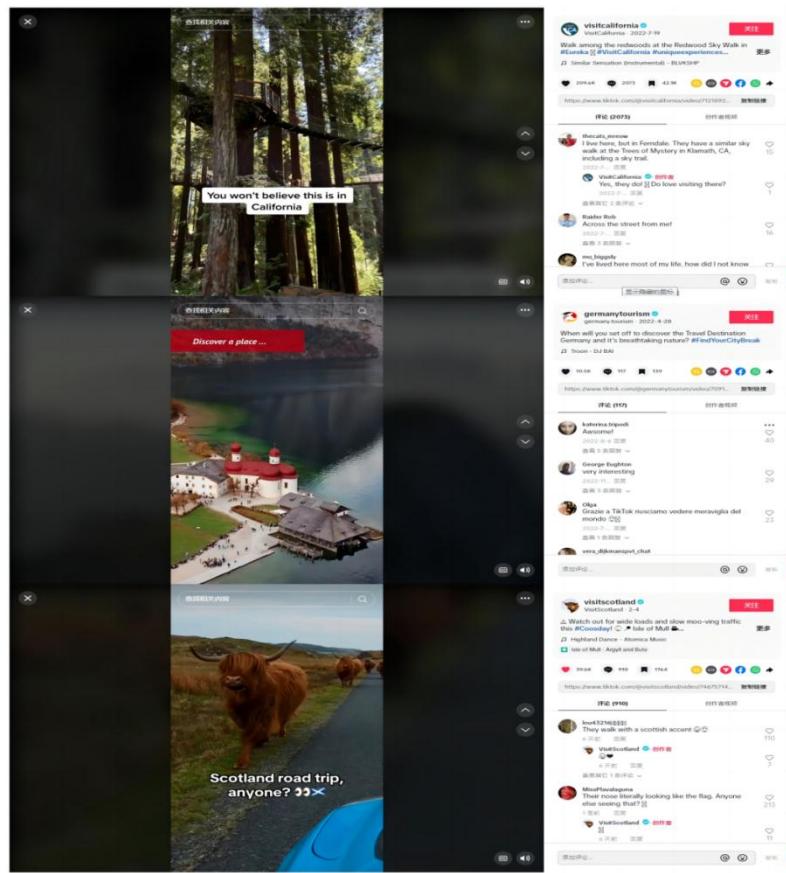
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style, including widespread slang or memes (where relevant and not crude), is likely to improve a post's resonant quality. Nevertheless, balance: while internet slang was effective in our sample, it should be used such that it is appropriate to the content and does not diminish the credibility of the source. Further, rather than pose questions, issue commands in titles, it might be preferable to draw out interesting facts or emotional hooks about the content.

**Music Choice:** Audio is a significant element in short videos. Our findings indicate that using popular music songs can help make a video more attractive to users, possibly because these songs align with existing popular music trends on Douyin. Government accounts might track what music sounds that are in trend on the platform, and see what can be used creatively to engage with its audience. In contrast, attaching popular music purely for decoration purposes is undesirable if the audio is hard to find or not suitable to the video content. Sometimes the sound of nature or the voice of the narrator (if that is entertaining) could be enough. In short, don't do anything nasty with music -if there is not the right one in the popular list or anyway proper, silent is golden.

**Visual Storytelling Over Talking-Heads:** Pretty images and visual scenes will always attract people's attention when it comes to promoting a place. For instance, in the foreign cultural and tourism account [tiltok](#) (as shown in Figure 6), there are many short videos that do not feature characters but only appear in the form of "visuals + music" or "visuals + ambient sound." Even when people appear, it is in minimalist vlog form that does not distract from the landscape. Whenever possible, just let the beautiful view of your site, the attraction, the food or the local activity become the main images in the video. Instead of constantly having shots of one person talking to the viewer's camera, which can decrease immersion. If you really need a presenter, you can instead have their voice-over (voice-over narration) presented without having to constantly show a person standing in front of those areas with the place background. The observation that so many viewers want a firstperson or observational view (what they would experience if they were there) rather than a third-person view (someone else speaks about it) has been seen as data driven.

**Figure 6:** Short video screenshots of the official tourism accounts of California, USA (@visitcalifornia), Germany (@germanytourism), and Scotland (@visitScotland)



Adopting the above methods can help to enhance the communication effects of government social media videos, so that public promotion is more effective. In fact, the account "Hebei culture and tourism" itself, through the process of exploring and seeking, has also adopted some of such strategies. Our study quantifies and verifies the effectiveness of such kinds of efforts, and produces evidence that could be used to persuade the relevant stakeholders of the significance of creative and public-oriented contents.

### Limitations and Future Research Directions

Although this study's contribution is significant, it is not perfect. To start, the sample is limited to one Douyin account in the cultural tourism field. Further studies could compare with multiple government accounts, or government accounts in different regions, to confirm whether the content attributes are universally considered important.

Second, our data are correlational, and based upon observations. As such, we can't be definitive about causality. While we have rendered our interpretation in causal terms, we can't rule out that content might not be fully controlling for unobservable variables, or biases in Douyin's recommendations algorithm. The next best data to measure this would

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be platform data that controls for reach, or otherwise controls for time of posting and follower count, thus isolating the effects of content.

A second shortcoming is that our content coding, detailed though it is, does not cover all the properties which contribute to what makes a video engaging. Qualitative factors (such as video quality, editing style, or emotion expressed in a video) were not coded directly. Including machine vision or machine learning approaches for characterizing a video's visual content, or even asking viewers questions about how video quality in a video feels could add to the analysis.

In addition, the index we defined was not a new form of measure of engagement; it is just the consequence of current common practices. As the platforms develop further, the subsequent scholars could revise these indicators or employ more sophisticated models to describe dissemination.

Lastly, in terms of method, our dependence on stepwise regression is known to be statistically imperfect (e.g., see potential issues with overfitting or instabilities in the selection of variables). While the confirmation of our results by ANOVAs and the fact that we have a reasonably sized dataset surely affords comfort on the matter, we could apply methods that may better robustly establish which variables are important, such as LASSO regression or random forest feature importance in future work.

## Conclusion

**Conclusion** This research gives a data-driven perspective into what content factors contribute to short informational video success in Chinese local government promotion on social media Douyin. We connected social media analytics and communication theory, showing that content makes a big difference: insignificant decisions over framing, titling and production of a video may have a big cumulative effect on audience reach and interactions. The case of "Hebei culture and tourism" demonstrates that communication stakeholders in the government of the new media platform should "go to the kitchen" and cater to the general public's internet usage habits – mixing policy informativeness with entertainment packaging, and central messages with grassroots interest.

We hope that government departments' release of TikTok/Douyin will not be solely pursuing extreme virality or absurdity without consideration of authority and authenticity, as too much authenticity diminishes the social presence and too much authority kills the joy. Authority and authenticity can be balanced to fully capitalize on social media for reaching out to the general audience. With public sector communication now having to contend for attention alongside an ever-growing flood of content producers, being able to comprehend and harness those strong content affect influencing factors identified through this research could enable publicsector communicators not just to speak to more people, but truly to communicate with them. The overall objective is that such effective



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communication enables citizens to get better information and get involved in cultural and tourism resources and form a virtuous cycle where both public interest and government's outreach objectives could be met.

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