Research on Short Video Dissemination Effect Evaluation Integrating User Preferences and Content Features: Postprint

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Abstract

[Purpose/Significance] Develop an evaluation model for short-video dissemination effects, providing a theoretical foundation for subsequent empirical evaluation research on short-video dissemination effects.

[Method/Process] Drawing upon Full-Information Sentiment Theory and Super IP Theory, this study analyzes user preferences and content characteristics from a multidimensional perspective, combines literature review and the Delphi method to analyze and summarize factors influencing short-video dissemination effects, and employs a Fuzzy Set Theory-DEMATEL model to screen key influencing factors among secondary indicators, thereby constructing a dissemination effect evaluation model and evaluation index system.

[Results/Conclusion] Eleven key influencing factors of short-video dissemination effects were identified, with official verification being the most critical factor. The resulting short-video dissemination effect evaluation model and evaluation index system provide a certain degree of decision support for research on short-video dissemination effects.

Full Text

Preamble

Short videos refer to video content played on various new media platforms, suitable for viewing during mobile and short leisure periods, with high-frequency push notifications and durations generally under five minutes. In 2016, the short video industry rose rapidly, and by 2018, it had entered a mature development phase in China, with increasingly 完善的 regulatory systems and a gradually stabilizing market landscape. According to the 2019 China Short Video Industry Research Report [1], the user base of short videos has grown rapidly, reaching

857 million users by June 2019. Short video usage time accounted for 11.4% of total internet usage time, surpassing comprehensive videos (8.3%) and becoming the second-largest application type after instant messaging (14.5%). Short videos have become an important means for netizens to obtain news information and entertainment. Platforms such as Douyin, Tencent Weishi, and Kuaishou have transformed audience habits from viewing only text and images to delivering more direct sensory impact through brief videos.

Due to their low creation threshold, strong social attributes, and fragmented entertainment features, short videos are more suitable for mass participation and have achieved greater propagation strength and speed. Short videos not only cater to users but also generate new demands. Through literature review, we found that existing research basically analyzes new media communication influence factors from a single perspective, and domestic literature mostly uses Weibo and WeChat as examples. Therefore, this paper integrates user preferences and content characteristics from two angles, based on the short video communication process, uses literature review and Delphi method to summarize influencing factors of short video communication effects, and employs fuzzy set theory-DEMATEL model to identify key influencing factors, constructing a preliminary communication effect evaluation model and index system to provide reference for subsequent empirical research on evaluating short video communication effects. The research logic of this paper is shown in Figure 1 [Figure 1: see original paper].

2 Literature Review and Theoretical Foundation

2.1 Literature Review

In short video platforms, users and content are closely connected, especially in the communication process where both are indispensable, forming a user-generated content (UGC) relationship. Based on this relationship, this paper analyzes and summarizes influencing factors of short video communication effects from the perspectives of platform registered users and short video content characteristics.

2.1.1 User Perspective Xu Chenfei and Zhou Yusang [3] studied the motivations behind user-generated content from three levels: intrinsic needs, social incentives, and technical incentives. They argued that intrinsic needs mainly involve entertainment, profit, public expression, and life documentation; social incentives involve social enhancement, social interaction, and altruism; technical incentives involve perceived ease of use, perceived usefulness, security, and technical reliability. They believed these three aspects respectively generate behavioral intentions through self-cognition, social influence, and comparison of costs and returns.

Zhang Xing, Wu You, et al. [4] built a model based on socio-technical theory to study factors influencing browsing and creation behaviors of male and

female mobile short video users, suggesting that individual factors include narcissism and extroversion; social factors include belonging needs and popularity needs; technical factors include information recording functions and entertainment functions. Their research showed that, regardless of gender, individual extroversion and entertainment functions, narcissistic traits and belonging needs, and popularity needs and information recording functions positively affect usage behavior, creation behavior, and browsing behavior respectively. Thus, the positive role of user needs in short video communication cannot be ignored.

Zhang Pengwei, Liu Hongli, et al. [5] argued that research on user influence in Weibo information communication could be approached from direct and indirect indicators, with indirect indicators being more meaningful than direct ones. Direct indicators include: number of followers, mutual follows, reposts, mentions, followees, number of posts, identity verification, and join time. Indirect indicators comprise user influence and activity, weighted by reposts, comments, mentions, original posts, self-replies, replies to others, and active days. Therefore, evaluating short video communication effects from the user perspective requires clearer indirect indicator data.

X. Zhang and Y. Wu et al. [6] explored factors of short video application addiction, proposing socio-technical and attachment perspectives, emphasizing that social interaction anxiety and social isolation increase interpersonal relationships, while personalization and entertainment increase website attachment. They argued that in short video social platforms, interpersonal attachment and website attachment promote short video application addiction.

J. Huang and R. Chen et al. [7] believed that interpersonal short video forwarding is one of the most popular activities among internet users, with forwarding intention being one key factor affecting this online interpersonal behavior. In their study of factors influencing forwarding intention, they proposed a quality perception → benefit expectation → intention model, tested with data from 210 undergraduate students. Results showed that perceptions of content quality and empathy affect expectations of beneficial control, inclusion, and emotion. They concluded that user needs cognition and emotional experience significantly affect behavior in short video communication.

Current research in this field mainly focuses on single-dimensional analysis or combined analysis of several aspects from needs, social, technical, and emotional perspectives, while multi-dimensional analysis of users themselves regarding short video communication effect influencing factors is relatively rare.

2.1.2 Content Perspective Zhang Haitao, Zhang Huiran, et al. [8] studied new media information communication influence evaluation from the perspective of super IP, starting from five evaluation indicator categories and using Weibo as an example to propose secondary indicators: (1) content power, with secondary indicators of word count and image information volume; (2) originality power, with secondary indicator of Weibo originality; (3) personality

power, with secondary indicators of like emotion, comment emotion, content sensitivity, and participant user characteristic commonality; (4) sharing power, with secondary indicators of effective repost volume, original @ volume, original #topic# volume, and participant user follower volume; (5) R monetization power, with secondary indicator of attention volume generated by Weibo.

Currently, as a more sensory-impactful information communication method, research on short video communication effects is relatively scarce, especially from the content characteristics perspective. Short video platforms and Weibo are both new media platforms with similar functions, where users can display original content to others and spread content through comments, reposts, and likes.

Based on literature review, this paper summarizes influencing factors in Table 1 .

2.2 Theoretical Foundation

2.2.1 Comprehensive Information Emotion Theory Comprehensive Information Emotion Theory [9] is a hypothesis of cognitive-emotion interaction mechanism proposed by Pu Jiang scholars in 2013, mainly studying the three processes of human needs, cognition, and emotion and their interrelationships. Based on comprehensive information theory, emotion-motivation-information theory, Maslow's hierarchy of needs, and PAD three-dimensional emotion model, this theory proposes a cognitive-emotion interaction mechanism driven by needs, establishes quantitative relationships among needs, information, and emotion, and believes that whether need expectations and emotional experiences match is key to generating new need motivations.

Pu Jiang scholars applied Comprehensive Information Emotion Theory to the formation mechanism of resonance teaching, arguing that the five-in-one, cyclic interaction of needs-cognition-emotion-behavior-experience is the core mechanism of resonance teaching formation. Resonance teaching refers to a state where various elements within the teaching system (including teachers, students, content, media, etc.) coordinate and develop synchronously in the time-space dimension, achieving interactive synchronization in needs, cognition, and emotion, presenting an ideal harmonious teaching state [9]. Similarly, from the user perspective, short video communication is analogous to resonance teaching, with elements including short video publishers, receivers, content, and media. Short video communication effects depend on users' cyclic interaction in needs, cognition, emotion, behavior, and experience.

2.2.2 Super IP Super IP refers to IP (intellectual property) with development value, indicating cross-media content operation with long vitality and high commercial value. Current scholars generally agree that super IP has four levels: presentation form, story, universal elements, and values [8]. Wu Sheng defines super IP as charismatic personality with content power and self-traffic,

possessing five key characteristics: content, originality, personality, traffic, and commercialization [16], which clearly aligns highly with short video content characteristics. This paper will further define short video communication elements and conduct in-depth research and model construction from the super IP perspective.

3 Short Video Communication Model Construction and Influencing Factors

3.1 Communication Model Construction

3.1.1 Short Video Communication Elements from Comprehensive Information Emotion Theory Perspective According to Comprehensive Information Emotion Theory, from the user perspective, there are five dimensions: needs, emotion, cognition, behavior, and experience to interpret the theory, which also form the basis for defining communication elements in short video communication. As shown in Figure 2 [Figure 2: see original paper]:

(1) **Needs**: In short video communication, needs refer to users' demands to browse and create short videos for their own reasons. According to Maslow's hierarchy of needs, these reasons can be summarized as short video users generating needs for safety, social interaction, respect, and self-actualization after physiological needs are met.

(2) **Emotion**: Emotion [8] is a relatively complex and stable physiological evaluation and experience of attitude, reflecting not only the effect of cognition on emotion and the counter-effect of emotion on cognition, but also existing in formalized expressions of experience, content expressed by experience, and utility and value reflected by form and content.

(3) **Cognition**: Cognition [11] refers to the process of acquiring knowledge or applying knowledge, or information processing, which is the most basic psychological process including sensation, perception, memory, thinking, imagination, and language.

(4) **Behavior**: Behavior refers to external activities shown under thought control.

(5) **Experience**: Experience refers to the process of understanding things in practice.

Figure 3 [Figure 3: see original paper] shows short video communication elements and their interrelationships based on Comprehensive Information Emotion Theory. From the user perspective, five communication elements can be defined: need power, cognition power, emotion power, behavior power, and experience power. According to Comprehensive Information Emotion Theory, user need power is the foundation of communication in short video propagation, while behavior power and experience power emerge from the interaction between

cognition power and emotion power. Whether experience power matches need power is key to generating new need power.

3.1.2 Short Video Communication Elements from Super IP Perspective The main dimensional characteristics of Super IP also form the basis for defining communication elements from this perspective, including five dimensions as shown in Figure 4 [Figure 4: see original paper]:

(1) **Content**: Content is the core of Super IP. High-quality content that can actively generate influence is the most critical basic driving force for promoting Super IP.

(2) **Personality**: Personality refers to the fully distinguishable personality necessary to compose Super IP, which can attract more users with a special sense of individuality.

(3) **Originality**: Originality is the foundation for derivation and re-creation. With the development of the times, users' awareness of intellectual property rights continues to strengthen, and originality is one of the necessary conditions for content with communication power.

(4) **Traffic**: Traffic is indispensable as the core. In IP communication and development, traffic is an important engine to boost information communication and a lasting force to promote IP development.

(5) **Commercialization**: Commercialization is the most driving characteristic of Super IP. Monetization value as a source of power supports the sustainable development of Super IP.

Figure 5 [Figure 5: see original paper] shows short video communication elements from the Super IP perspective.

3.1.3 Short Video Communication Model According to the above, short video communication elements can be defined from the user preference perspective as five communication elements: need power, cognition power, emotion power, behavior power, and experience power; from the content perspective as five communication elements: originality power, content power, personality power, sharing power, and monetization power. With the development of internet applications, the interactive role of network users is manifested, where users are both browsers and creators of network content [15]. Based on this UGC relationship, the short video communication model is constructed as shown in Figure 6 [Figure 6: see original paper].

3.2 Influencing Factors of Short Video Communication Effect

In short video platform content communication, summarized from the Super IP perspective are five communication elements: originality power, content power, personality power, sharing power, and monetization power (see Figure 5). In the short video generation stage, the basic level of short video communication

consists of originality power and content power. In the deepening stage of short video communication, personality power is the most dominant factor. In the information dissemination stage, sharing power serves as the main force, mainly referring to post-publication behaviors based on the number of user followers and certain influential topics, such as user reposting behavior. Monetization power is the most driving characteristic of short video content communication, where the main body gains more attention and information resources are more widely disseminated as its purpose and foundation.

3.2.1 Influencing Factors from Comprehensive Information Emotion Theory Perspective Based on Comprehensive Information Emotion Theory, users on UGC short video platforms experience a process of needs-emotion-cognition-behavior-experience. Specific evaluation elements are based on five primary indicators: need power, emotion power, cognition power, behavior power, and experience power.

Need Power: Refers to users' diverse needs to create various contents in short video communication. That is, users have the desire to showcase themselves, display their skills, personal charm, and share emotions through short video publication to reach more audiences; publish personal life records as meaningful activities; establish connections with other users for communication; gain higher popularity; utilize platform recommendations to sell products and obtain profits; and receive official certification.

Emotion Power: Users believe browsing and creating short videos can satisfy their senses and emotional resonance. By following favorite users, browsing interest-related videos, and creating and publishing videos, they can obtain the latest current events and disseminate news anytime, anywhere.

Cognition Power: After experiencing multiple UGC platforms, users believe short video shooting is simple and easy to understand, production is convenient, and desired sensory effects can be achieved in a short time. Technological implementation is constantly updated, with diverse presentation methods and functions such as special effects, props, filters, beautification, and editing providing more considerate services. Users believe publishing short videos is more secure, with watermarked content that is difficult to be improperly used by others, detailed privacy protection settings, and youth modes for teenagers. Users believe browsing short videos is more convenient and intuitive for obtaining information.

Behavior Power: User short video behaviors can be divided into browsing behavior and creation behavior. Browsing behavior refers to users' information acquisition behavior when using short videos, mainly reflected in the number of short videos watched and browsing time. Creation behavior includes original and forwarding behaviors, reflected in users' total dynamic count, mainly in the number of original short video works.

Experience Power: Whether users' browsing and creation experiences match

expected needs determines whether new need motivations are generated. High matching degree means high experience power, while low matching degree means low experience power.

3.2.2 Influencing Factors from Super IP Perspective From the Super IP perspective, specific evaluation elements of short video content communication are based on five primary indicators: originality power, content power, personality power, sharing power, and monetization power.

Originality Power: The non-reposted originality of short videos, characterized by "non-repetition" and "innovation," affects whether they can stand out in complex information. Short videos with high originality power can not only highly 契合 environmental requirements but also quickly occupy trend nodes, causing other users to imitate.

Content Power: Based on Super IP, high-quality content is the core of a high-quality IP that can deeply reach information audiences. Whether the state of things can be described in detail by content, whether people's needs can be satisfied, and whether information is substantial are key to evaluating content. In short videos, this is reflected in video duration, background music appeal, and expressiveness (language, emotion rendering, etc.).

Personality Power: IP brands with high personalization have stronger effects, aiming to transform content into non-standardized IPs with strong recognizability and scarcity [17]. In short video communication, personality power can be specifically reflected in user tags such as age, gender, and region, as well as user affinity and official certification. Officially certified users have certain influence (celebrity effect), and their comments on videos cause other users to imitate, further expanding influence.

Sharing Power: Information expands and amplifies influence from "traffic." In short video platforms, specific influence can be considered through effective repost volume, original @ volume, #topic# volume, and user activity, such as participant user follower volume, user dynamic count (including original and forwarded works), like count, received like count, and view count.

Monetization Power: In short video communication, transforming short video content into monetization power, i.e., the attention volume generated by a short video, determines the persistence of influence. Users who generate high attention volume will have stable fan growth, thereby owning fan groups, producing more lasting influence, and possessing certain commercial value. This can be specifically represented by short video play volume and like volume.

Based on domestic and international literature review and the above discussion, this paper obtained 47 influencing factors of short video communication effects and used the Delphi method to consult 8 experts in related fields. After three rounds of investigation, combined with characteristics of short video communication processes, 26 influencing factors were finally determined, forming the

short video communication effect evaluation element table as shown in Table 2 .

4 Identification of Key Influencing Factors

4.1 Method Selection

The DEMATEL method is an effective approach for factor analysis and identification, primarily using graph theory and matrix operations centered on constructed graphs. The necessary condition for smooth implementation is obtaining a direct relation influence matrix, which is based on data from expert group scoring. Since expert subjective scoring leads to insufficiently objective results, it needs to be combined with fuzzy set theory. Triangular fuzzy numbers are a method to transform fuzzy and uncertain language variables into definite values, which can well resolve the contradiction that evaluated object performance cannot be accurately measured but can only be evaluated with natural language [18]. Therefore, the fuzzy set theory-DEMATEL method not only promotes data objectivity but also invites relevant domain experts for scoring, ensuring result professionalism.

4.2 Data Processing of Fuzzy Set Theory-DEMATEL Method

4.2.1 Data Source This paper designed an expert scoring table for short video communication effect influencing factors, inviting experts covering academic fields and short video platform-related fields, as well as short video users with different influence levels: 2 professors in new media short video communication research, 2 short video platform managers, 2 high-influence short video users, and 2 ordinary short video users. Scoring was divided into five levels (0, 1, 2, 3, 4), representing no influence, small influence, moderate influence, large influence, and very strong influence respectively. The specific formula process referred to Yan Yiwen and Zhang Haitao et al. [19] in identifying key influencing factors of government WeChat information communication. A total of 8 scoring tables were distributed and collected. According to the comparison table shown in Table 3 [19], scores were converted into triangular fuzzy numbers $Z_{ijk} = (l_{ij}, m_{ij}, r_{ij})$, $1 \leq k \leq 8$, where this formula represents the fuzzy processing value of any expert's influencing factor i on factor j, with l (left) representing the left side, m (middle) representing the middle side, and r (right) representing the right side.

4.2.2 Data Defuzzification According to triangular fuzzy number principles, 8 experts' scoring data were standardized, fuzzy numbers were reduced, and left and right standard values, total standard values, and overall standardized influence degree values were calculated to finally obtain the direct influence matrix A.

(1) Standardize triangular fuzzy number matrix

$$\Delta_{ij} = \frac{\sum_{k=1}^{8}(r_{ij}^k - l_{ij}^k)}{8}, \quad 1 \le k \le 8 \tag{1}$$

(2) Reduce fuzzy numbers, calculate left and right standard values

$$x_{ls}^k(ij) = \frac{m_{ij}^k - \min l_{ij}^k}{\Delta_{ij}}, \quad 1 \le k \le 8 \tag{2}$$

$$x_{rs}^k(ij) = \frac{\max r_{ij}^k - m_{ij}^k}{\Delta_{ij}}, \quad 1 \le k \le 8 \tag{3}$$

(3) Calculate total standardized value and the kth expert's standardized influence degree value of influencing factor i on factor j

$$x_{ij}^k = \frac{x_{ls}^k(ij) + x_{rs}^k(ij)}{2}, \quad 1 \le k \le 8 \tag{4}$$

(4) Calculate the influence degree value of influencing factor i on factor j from all experts' scoring

$$a_{ij} = \min x_{ij}^k, \quad 1 \le k \le 8 \tag{5}$$

Through the above formulas, all experts' influence degree values for each factor were calculated to obtain the direct influence matrix A, shown in Table 4 .

4.2.3 Matrix Standardization

(1) Transform direct influence matrix A into standardized influence matrix B

$$B = \frac{A}{\max_{1 \le i \le 26} \sum_{j=1}^{26} a_{ij}} \tag{6}$$

(2) Calculate comprehensive relation matrix T

$$T = B(I - B)^{-1} \quad (I \text{ is the identity matrix}) \tag{7}$$

4.3 Data Processing Results Analysis

4.3.1 Results Presentation Calculate the sum of each row element in matrix T, representing the total degree to which factor i directly or indirectly influences all other factors, i.e., influence degree (D). Calculate the sum of each column element, representing the total degree to which factor i is directly or indirectly influenced by all other factors, i.e., influenced degree (R). The sum of influence degree and influenced degree represents the importance of the factor, i.e., centrality ($D + R$). The difference between influence degree and influenced degree represents the degree to which the factor influences other factors without being influenced, i.e., cause degree ($D - R$). Rank and visualize the results as shown in Table 5 and Figure 7 [Figure 7: see original paper].

4.3.2 Analysis of Inter-factor Relationships Result factors include C_2, C_4, C_5, C_6, C_8, C_{10}, C_{11}, C_{12}, C_{16}, C_{17}, C_{21}, C_{22}, C_{25}. Cause factors include C_1, C_3, C_7, C_9, C_{13}, C_{14}, C_{15}, C_{18}, C_{19}, C_{20}, C_{23}, C_{24}, C_{26}, meaning these factors can actively influence other factors.

Positive experience (C_{12}) ranks first in influenced degree and 22nd in influence degree, showing the strongest possibility of being influenced. Similar factors include browsing behavior (C_{10}) and expressiveness (C_{16}), which also show strong passivity. Popularity need (C_4) and profit need (C_5) rank high in both influence degree and influenced degree, with little difference, indicating strong correlation with other factors.

User tags (C_{18}) rank first in both influence degree and cause degree, but 14th in influenced degree, obviously having extremely strong ability to influence other factors but not easily being influenced itself. Similar factors include public expression (C_1), social need (C_3), timeliness (C_7), background music appeal (C_{15}), user affinity (C_{19}), and like volume (C_{26}).

However, technical security (C_9), negative experience (C_{13}), short video duration (C_{14}), and #topic# volume (C_{23}) rank low in both influence degree and influenced degree, showing insufficiently close connections with other factors. Official certification (C_{20}) ranks 2nd in influence degree and 3rd in influenced degree, while user activity (C_{24}) ranks 4th in influence degree and 7th in influenced degree, indicating relatively close causal relationships between these two factors and other factors.

Creation behavior (C_{11}), short video originality (C_{17}), technical security (C_9), and like volume (C_{25}) rank moderately in influenced degree but low in influence degree, showing only weak influenced characteristics. Life record (C_2), entertainment (C_6), simplicity and efficiency (C_8), effective repost volume (C_{21}), original @ volume (C_{22}) rank low in both influence degree and influenced degree, proving these factors have relatively distant relationships with other factors.

4.3.3 Key Influencing Factors Identification Results In the key influencing factors identification process, the larger the centrality ($D+R$), the more important the corresponding influencing factor, and vice versa [13]. Additionally, comprehensively considering the ranking of influence degree (D) and influenced degree (R), among the 26 influencing factors, the top 15 factors by centrality are shown in Table 6 .

Official certification (C_{20}) ranks 1st in centrality, 2nd in influence degree, and 3rd in influenced degree, showing extremely strong active and passive influence in short video communication, thus can be identified as a key influencing factor. Similarly, popularity need (C_4) ranks 4th in centrality, 6th in influence degree, and 5th in influenced degree, also identifiable as a key factor. User activity (C_{24}) ranks 4th in influence degree, 7th in influenced degree, 5th in centrality, and 7th in cause degree, belonging to cause factors, also identifiable as a key factor.

User tags (C_{18}) rank 2nd in centrality and 1st in influence degree, having the largest influence degree and ranking 1st in cause degree, extremely easily influencing other factors, thus identifiable as a key factor. Similarly, public expression (C_1) ranks 3rd in centrality and influence degree, and 5th in cause degree, belonging to cause factors, also identifiable as a key factor.

Expressiveness (C_{16}) ranks 6th in centrality, 8th in influence degree with relatively strong active influence, but 2nd in influenced degree with very strong passive influence, thus identifiable as a key influencing factor.

Positive experience (C_{12}) ranks 10th in centrality (not high), but 1st in influenced degree, showing extremely strong passive influence, thus identifiable as a key factor. Similarly, profit need (C_5) ranks 7th in centrality and 6th in influenced degree with relatively strong passive influence, also identifiable as a key factor. Browsing behavior (C_{10}) ranks 8th in centrality and 4th in influenced degree, easily influenced by other factors, thus identifiable as a key factor.

Like volume (C_{26}) ranks 9th in centrality (not high), but 7th in influence degree, belonging to cause factors with relatively strong active influence, thus identifiable as a key factor.

User affinity (C_{19}) ranks 5th in influence degree and 2nd in cause degree. Although centrality only ranks 13th, it still shows extremely strong active influence, thus identifiable as a key influencing factor.

Creation behavior (C_{11}), play volume (C_{25}), short video originality (C_{17}), and effective repost volume (C_{21}) rank in the top fifteen in centrality, but the identification process needs to comprehensively consider influence degree and cause degree rankings. Although some of these factors have high influenced degree rankings, their active influence is not obvious, so these four factors cannot be identified as key influencing factors.

Other factors including social need (C_3), #topic# volume (C_{23}), negative experience (C_{13}), background music appeal (C_{15}), timeliness (C_7), life record (C_2), entertainment (C_6), short video duration (C_{14}), original @ volume (C_{22}), and simplicity and efficiency (C_8) rank 16th-26th in centrality, with unsatisfactory rankings in both influence degree and influenced degree, thus also cannot be identified as key influencing factors.

5 Evaluation Model Construction

5.1 Evaluation Model

Combining the relationships among influencing factors and the short video communication process, this paper constructs a short video communication effect evaluation model integrating user preferences and content characteristics, providing a foundation for future comparative studies of short video communication effects. The communication effect can be evaluated based on influencing factors

and corresponding indicator data in the model, as shown in Figure 8 [Figure 8: see original paper].

5.2 Evaluation Index System

Through analysis of the above calculation results, 11 key influencing factors were identified: public expression (C_1), popularity need (C_4), profit need (C_5), browsing behavior (C_{10}), positive experience (C_{12}), expressiveness (C_{16}), user tags (C_{18}), user affinity (C_{19}), official certification (C_{20}), user activity (C_{24}), and like volume (C_{26}). Among them, official certification has the largest centrality and is the most critical factor affecting short video communication effects. The evaluation index system is thus constructed as shown in Table 7 .

6 Conclusion and Outlook

This paper integrates user preferences and content characteristics, introduces Comprehensive Information Emotion Theory and Super IP perspectives, details short video communication elements and processes, uses literature review and Delphi method to summarize influencing factors of short video communication effects, and employs fuzzy set theory-DEMATEL method to further identify key influencing factors, determining eleven key influencing factors of short video communication effects, thereby constructing a short video communication effect evaluation model and index system.

Research on short video communication effect evaluation not only provides a theoretical foundation for subsequent case evaluations but also, by extension, enables short video platforms to further understand user needs, continuously improve service quality, analyze and evaluate high-quality content, promote efficient content communication and product promotion, drive innovation in communication models, and achieve sustainable development of short videos in the future.

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Author Contributions

Zhou Honglei: Collection and processing of Chinese literature;
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Research on the Evaluation of Short Video Communication Effect Based on User Preference and Content Characteristics

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Abstract: [Purpose/significance] This paper constructs an evaluation model of short video transmission effect, providing a theoretical basis for subsequent empirical evaluation research on short video transmission effect. [Method/process] Based on comprehensive information emotion theory and super IP theory, this paper analyzes user preferences and content characteristics from a multi-dimensional perspective, combines literature review and Delphi method to summarize factors affecting short video transmission effect, and uses fuzzy set theory-DEMATEL model to screen key influencing factors of secondary indicators, constructing a transmission effect evaluation model and evaluation index system. [Result/conclusion] Eleven key influencing factors of short video transmission effect were identified, among which official certification was the most critical factor. The short video transmission effect evaluation model and evaluation index system thus constructed provide a certain degree of decision support for short video transmission effect research.

Keywords: short video communication effect user preference content characteristics influencing factors

Note: Figure translations are in progress. See original paper for figures.