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The Influence of User-Generated Content on Information Dissemination Patterns in Social Media Platforms: A Case Study of TikTok

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Abstract:

In the context of rapid advancements in digital information technology, user-generated content (UGC) on social media platforms has emerged as a crucial form of information dissemination. Although substantial research has been conducted on UGC, there remains a paucity of studies focusing on TikTok's dissemination pathways and the influence of user interactions on the underlying mechanisms of information propagation. Analyzing these patterns holds significant theoretical and practical relevance. This paper employs qualitative analysis and case study methodologies to conduct an in-depth investigation of the characteristics of UGC on TikTok and its effects on information dissemination pathways and mechanisms. The findings reveal that TikTok's decentralized dissemination model, driven by recommendation algorithms, facilitates the rapid diffusion of high-quality content, thereby increasing the diversity of information. However, this decentralized model also poses challenges, such as the proliferation of misinformation and inadequate regulatory oversight, leading to issues like information homogeneity and the "echo chamber" effect.

Keywords: New Media and Digital Communication, Decentralized Communication, User-Generated Content (UGC), Social Media Platform, TikTok.

1. Introduction

In the digital era, social media platforms have witnessed unprecedented growth. Over the past decade, social media has undergone substantial transformations, particularly in the modes of content production and dissemination. Traditional media dissemination models are generally unidirectional, where content is produced by media institutions and passively received by audiences. However, with the widespread adoption of Web 2.0 technologies, social media platforms have empowered ordinary users to generate

and disseminate content with ease. This shift has significantly contributed to the diversification of information sources and the optimization of dissemination pathways. Specifically, it has broadened the variety of information sources and enhanced the efficiency of information dissemination. Simultaneously, user-generated content (UGC) has become an integral concept in contemporary information dissemination processes [1].

Representing short video social media platforms, TikTok has become a prominent force. It has established a vast global user network, becoming a crucial platform for information dissemination. By 2023, TikTok's global active user base had exceeded 1 billion, with over 800 million daily active users in China alone [2]. These figures not only highlight TikTok's immense global influence but also underscore the significant role that user-generated content (UGC) plays in the realm of information dissemination.

Although extensive research has been conducted on user-generated content (UGC) across social media platforms, studies that focus specifically on TikTok—particularly those examining the influence of its UGC on content dissemination—are still in their infancy. Existing research tends to focus on the impact of UGC on branding and consumer behavior, while less attention has been given to the specific dissemination pathways of this content on social media and how user interactions affect the mechanisms of information propagation [3]. Therefore, exploring the dissemination patterns of UGC on TikTok and its impact on information dissemination mechanisms is of both academic and practical importance. Theoretically, analyzing the content characteristics of UGC on TikTok can enrich the understanding of content generation and dissemination patterns on emerging social media platforms. Practically, studying the dissemination pathways and influencing factors of such content can reveal insights into the diffusion patterns of information on social media platforms, thereby providing valuable references for e-commerce marketing and public relations management.

Based on this context, this paper aims to address several key questions: the content characteristics of UGC on the TikTok platform, the ways in which these content characteristics affect information dissemination pathways, the methods by which users participate in UGC production and interaction, and the impact of these on information dissemination mechanisms. This study employs qualitative analysis and utilizes the case study method to conduct an in-depth exploration of UGC on TikTok.

The structure of this paper is as follows: The first section serves as the introduction. The second section provides an overview of the relevant theories on UGC and information dissemination, as well as an introduction to the basic features of the TikTok platform. The third section presents a case study, offering a detailed analysis of the platform's functions, user demographics, and its influence. The fourth section focuses on the analysis of UGC, exploring its content characteristics, dissemination pathways, and the influence of user interaction on information dissemination. The fifth section discusses the impact on information dissemination mechanisms, examining how UGC on TikTok alters information dissemination patterns. The final section summarizes the findings of the study and offers prospects for future research.

2. Theoretical Foundations and Related Concepts

2.1 The Basic Concept of UGC

User-generated content (UGC) is defined as various forms of content created, published, and disseminated by users of online systems through independent channels. In essence, UGC refers to content that users autonomously create and share on the internet, encompassing a wide range of media formats such as text, images, and videos, which are disseminated via social media, blogs, forums, and other platforms [4]. In academic research, UGC is recognized as a vital component of information dissemination in the digital era, with its characteristics, dissemination mechanisms, and impacts receiving extensive attention [5].

2.2 Theoretical Analysis of User-Generated Content and Information Dissemination Patterns on Social Media Platforms

2.2.1 Two-Step flow theory

The two-step flow theory was introduced by Elihu Katz and Paul F. Lazarsfeld in 1955 [6]. According to this theory, key opinion leaders (KOLs) first receive and comprehend media messages, and then relay these messages to their social circles through everyday social interactions [6].

2.2.2 Participatory culture theory

Emerging from the rapid development of digital technology, participatory culture theory was proposed by Henry Jenkins and describes a user-centered cultural phenomenon [7]. Jenkins argues that traditional mass communication models are being replaced by a new paradigm in which audiences are no longer passive receivers of information but also creators and disseminators of content [7]. This shift marks the transition from a one-way, top-down communication process to a more interactive and decentralized mode of content generation and distribution.

2.2.3 Homophily effect

The homophily effect is a crucial concept in sociology, re-

ferring to people's likelihood to interact with people with similar views to them [8]. This tendency has a dual nature: while it can strengthen group cohesion, it may also restrict the inflow of external information, leading to a decrease in the diversity of information available to individuals. The homophily effect, particularly on social media platforms, can contribute to the formation of echo chambers, where users are exposed to repetitive or homogeneous information, reinforcing pre-existing beliefs and limiting exposure to diverse perspectives.

3. Case Study of TikTok

TikTok, known as Douyin in China, was created by the Chinese tech company ByteDance and initially launched in China in September 2016 as Douyin. In 2018, ByteDance acquired the short-form music video app Musical.ly, merging it with TikTok to facilitate rapid expansion into the European and American markets, eventually promoting it worldwide [4]. As of 2023, TikTok's user base spans over 150 countries and regions, making it one of the most popular social media platforms among teenagers and young adults [2].

The core functionality of TikTok allows users to create, edit, and publish short videos ranging from 15 seconds to 3 minutes. Unlike traditional social media platforms, TikTok's content is primarily presented in vertical video format, which is more suited to mobile devices such as smartphones and tablets.

TikTok's target demographic is characterized by its youthful nature. Globally, 34.8% of its users are between the ages of 16 and 24 [9]. This generation, known as "Generation Z" or "digital natives", is accustomed to receiving information and entertainment through short videos and social media. While traditional social media platforms tend to rely on interpersonal networks among users, TikTok is more dependent on interest-driven content recommendations. TikTok has accurately captured the needs of this generation, utilizing a powerful algorithm to push personalized content, which in turn attracts and retains a vast user base. This process not only significantly shapes the user viewing experience but also reconstructs the pathways of information dissemination in a subtle yet profound way [10]. The algorithm continuously adjusts content recommendations to meet users' immediate interests and preferences, redefining the evolution of information dissemination.

Through its innovative technology and precise market positioning, TikTok has successfully established a robust UGC platform on a global scale. Its recommendation algorithms, content creation tools, and trend-aligned information dissemination model have rapidly helped the platform amass a loyal user base, including influencers and bloggers, while also attracting e-commerce companies. These users continuously generate a wide variety of UGC (including, but not limited to, content related to entertainment, music, fashion, and food). TikTok's success has not only transformed the way short videos are disseminated but also provided new directions for the development of other social media platforms.

4. Analysis of User-Generated Content on TikTok

User-generated content (UGC) on the TikTok platform is not only one of its core attractions but also a critical component of its information dissemination model. By analyzing content characteristics, dissemination pathways, and user participation and interaction, this paper provides a comprehensive research framework that enables a deeper understanding of the operational dynamics of UGC on TikTok, as well as how this content influences information dissemination through both platform mechanisms and user behavior.

4.1 Content Characteristics

UGC on TikTok generally exhibits several defining characteristics: short duration, novelty, and ease of browsing. Most videos are between 15 and 60 seconds long [11]. This format caters to the modern user's shortened attention span, allowing content to quickly capture users' interest, thereby enhancing its consumability [12]. Additionally, TikTok offers an extensive range of editing tools, filters, special effects, and a large music library, making it an all-in-one application [11]. These features lower the barrier to content creation, enabling ordinary users to easily produce appealing video content.

Moreover, the social attributes of TikTok content are strongly pronounced. In addition to video production, the platform offers social functions such as messaging, following other users, and keeping track of how many comments, likes, and shares a video gets. This transforms TikTok into more than just a video-sharing platform—it also serves as a social networking service [11].

Finally, cross-cultural communication is another significant aspect of the diverse UGC on TikTok. Given its global user base, content on the platform often reflects pronounced characteristics of intercultural exchange [13]. Users from different countries and regions share UGC that showcases the unique charm of their local cultures, fostering mutual understanding and integration between cultures [13]. For instance, beauty videos on TikTok may combine popular trends from Asia, Europe, and Africa. This cross-cultural dissemination has turned TikTok into

a global cultural exchange platform, encouraging interaction among users worldwide.

4.2 Dissemination Pathways

Overall, TikTok's content dissemination is decentralized, as it relies more on the platform's recommendation algorithm than on users' social networks [10]. This decentralized dissemination model allows high-quality content to transcend the limitations of social networks or interpersonal relationships, reaching a broader audience more rapidly [10].

The platform's recommendation algorithm functions by using collaborative filtering based on users' basic information, precise recommendations based on social relationships, and traffic-pool-based incremental recommendations that analyze user behavior data to push content that aligns with user interests to their "For You" page [14]. This AI-driven recommendation mechanism not only enhances the user experience in consuming content but also accelerates viral content dissemination. For example, when a piece of content receives a large number of likes and shares, the algorithm amplifies its reach by recommending it to more users, thereby creating a "secondary dissemination" effect [14].

4.3 User Participation and Interaction

User participation and interaction play a crucial role in the dissemination of UGC on the TikTok platform. This process is primarily reflected in three aspects: content creation, interactive feedback, and community building.

This section focuses on how content creation influences UGC dissemination. TikTok lowers the barriers to content creation in order to encourage more users to engage in UGC production [11]. Numerous studies have confirmed that younger users are the demographic group most significantly influencing content creation [15]. For instance, another well-known social media platform, YouTube, imposes several constraints on content creation. While young users are actively involved in video production on YouTube, they tend to avoid or minimize editing due to the need for specific technical knowledge and, at times, financial investment [16]. In contrast, TikTok's content creation process only requires a few clicks on a smartphone, making it more appealing to younger audiences [11].

In addition to basic interactive features like likes, comments, and shares, TikTok offers more dynamic forms of engagement, such as "duets" and video stitching, which allow users to participate directly in others' content creation. These features enable users to interact with their favorite influencers or take part in trending topics and challenges on the platform. Such behaviors increase platform activity and enhance user retention [17].

Finally, TikTok gathers like-minded users through hashtags, challenges, and trending topics, fostering the formation of small communities centered on shared interests and goals [18]. The existence of these communities strengthens users' sense of belonging and participation, making TikTok's UGC ecosystem more diverse and vibrant [7].

4.4 Impact on Information Dissemination Mechanisms

4.4.1 The rise of decentralized dissemination

Traditional models of dissemination typically rely on centralized media institutions that control both the creation and distribution of information [10]. However, TikTok's dissemination mechanism bypasses traditional social networks and media structures, delivering content directly to a global user base [2]. This decentralized dissemination model disrupts the previous dependence on centralized media, allowing ordinary users to achieve widespread distribution of their UGC in a short period of time [10].

On TikTok, any user has the opportunity to have their UGC recommended to a broader audience, breaking down traditional barriers to information dissemination [19]. This mechanism helps increase the diversity of information, allowing voices from different cultural backgrounds, social strata, and interest groups to be widely heard on the platform [20]. TikTok not only transforms the flow of information but also weakens the dominance of traditional media in information dissemination.

However, this decentralized model also presents challenges, such as the difficulty in controlling the spread of harmful UGC and the lack of authoritative gatekeepers in the dissemination process. In traditional media, editors and content reviewers ensure that information is fact-checked and curated. On TikTok, however, users must rely on the platform's algorithms and their own judgment to assess the reliability of the information, which may not always prevent the spread of misinformation.

4.4.2 The pros and cons of personalized recommendations

TikTok's core algorithm analyzes user behavior to push highly personalized content [10]. In the new media era, social media platforms aim to provide users with tailored information through algorithmic recommendations. While this helps alleviate the issue of information overload, it also leads to the creation of "filter bubbles" [21].

Under the mechanism of personalized recommendations, users are increasingly exposed to content that aligns with their existing interests and perspectives, thereby creating a filter bubble. This means that users may encounter a narrower range of information on the platform, reducing their

exposure to diverse viewpoints and exacerbating information homogeneity [8].

From another perspective, personalized recommendation systems are not entirely negative. They increase the accuracy of information dissemination, enhancing the efficiency of information retrieval [10]. For content creators, personalized recommendations also offer more opportunities for exposure, especially for creators producing innovative or niche content, enabling them to reach specific audiences through UGC on TikTok [17].

4.4.3 Formation and influence of public opinion

The dissemination of information on TikTok not only affects individual users' perceptions and behaviors but also plays a significant role in shaping and influencing public opinion. Popular content and trending topics on TikTok often spark widespread discussions and imitation, becoming part of broader social discourse [22]. The unprecedented speed and scale of information dissemination contribute to the rapid fluctuations of public sentiment.

Short videos on TikTok have become a critical medium for the expression of public opinion. This format is more visual and emotionally engaging, which can lead to more emotional and extreme social discourse, sometimes even resulting in "cyberbullying" [23]. Due to TikTok's information dissemination model, acts of cyberbullying may easily escalate beyond the initial perpetrator's control. For instance, a single harmful act can be repeated by others, meaning that victims may endure multiple instances of harm [23].

5. Conclusion

Based on the theoretical framework formed by the two-step flow theory, participatory culture theory, and the homophily effect, this study conducted an in-depth exploration of the impact of user-generated content (UGC) on information dissemination mechanisms by analyzing the content characteristics, dissemination pathways, and user participation and interaction on the TikTok platform. Several important conclusions were drawn from the research. It was found that TikTok's UGC is characterized by short duration, creative diversity, and algorithm-driven dissemination. Through a decentralized dissemination model and highly personalized recommendation algorithms, TikTok not only disrupts the traditional media monopoly on information dissemination but also significantly enhances the efficiency of information propagation.

However, TikTok's core algorithm, specifically the recommendation algorithm, acts as a double-edged sword, reducing information diversity and narrowing users' exposure to a wide range of content. While it facilitates the broad dissemination of UGC, it also results in negative consequences such as the formation of filter bubbles and the occurrence of cyberbullying.

These findings serve as a reminder to platform operators to balance enhancing user experience with ensuring the authenticity of information. It is essential to strengthen the regulation of UGC to prevent the spread of harmful content, maintain a healthy dissemination environment, and take measures to avoid the over-reliance on algorithms that could lead to information silos and excessive public pressure.

This study addresses a gap in current academic research regarding the UGC dissemination mechanisms on TikTok, particularly in terms of algorithm-driven decentralized dissemination and user participation and interaction. It provides new perspectives and empirical support that will aid researchers in better understanding and optimizing information dissemination mechanisms on the platform.

Despite the contributions of this study, there are certain limitations. Firstly, the examination of user-generated content on TikTok is the main focus of this study. Future research could adopt a comparative case study approach, extending the analysis to other social media platforms to enhance the generalizability of the conclusions. Secondly, future studies could explore technological methods to optimize algorithmic recommendations, reducing the effects of information filtering while promoting the dissemination of diverse content, thereby contributing to a more inclusive and healthy media dissemination ecosystem.

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