New Media Operation: Art of Content Innovation and User Interaction

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Abstract. This paper delves into the development, theoretical foundations, and significance of new media operation in contemporary information dissemination. It firstly introduces the background and significance of new media operation research, emphasizing the central role of content innovation and interactivity. It defines new media operation and analyzes its development trajectory and current trends, including the application of big data and artificial intelligence technologies. The paper also explores the theoretical framework of new media operation, its main strategies, and practical effects, while analyzing the challenges and opportunities currently faced. Finally, future research directions are proposed, including the evolution of new media, the integration of scientific journals with social media, and the in-depth operation of private domain traffic.

Keywords: New Media Operation; Information Dissemination; Content Innovation

1 INTRODUCTION

Social media, as an important branch of new media, has become a focal point of attention in both academia and practice. In this field, researchers have explored the impact of social media on various aspects such as organizational impression management, user engagement, information dissemination, and marketing from multiple perspectives and through various methods. For instance, Huerta et al. (2023) revealed how hospitals utilize social media as an electronic interface to enhance patient engagement and satisfaction, demonstrating the potential of social media in improving interactions between healthcare service providers and patients [1]. Additionally, Vijaykumar et al. (2015) introduced the RAMS model, providing a fresh perspective on how social media influences public risk perception during infectious disease outbreaks and offering guidance for effective communication strategies [2]. Furthermore, Aydin et al. (2021) emphasized the importance of post characteristics in social media management for enhancing consumer engagement by analyzing the performance of consumer goods companies [3]. Wu and Shen (2015) showcased how analyzing news propagation features on Twitter can lead to the development of models capable of rapidly predicting news popularity, which is crucial for timely and accurate information dissemination [4]. These studies not only

enrich our understanding of the functions and impact of social media but also provide theoretical and empirical foundations for future social media strategy formulation and application.

Despite the progress made in understanding the role and influence of social media, there are still some limitations. Firstly, many studies focus on specific industries or regions, lacking a global perspective and cross-cultural comparisons (Khan et al., 2019; Tsiotsou, 2022) [5][6]. Secondly, research on the application of emerging technologies such as artificial intelligence and machine learning in social media management, and how these technologies alter user behavior and organizational strategies, remains relatively scarce (Prodanova & Van Looy, 2019; Ghezzi et al., 2016) [7][8]. Additionally, existing literature does not thoroughly explore the potential risks of social media regarding individual privacy and data security, which is crucial for understanding and addressing challenges in the digital age (Surucu-Balci et al., 2020; Ma et al., 2023) [9][10]. This paper aims to fill these gaps, with a particular focus on the art of content innovation and user interaction, which lies at the core of enhancing the effectiveness of new media operations.

We will analyze the theoretical foundations and strategic practices of new media operations, explore the application of emerging technologies such as artificial intelligence, and examine how they reshape user behavior and organizational strategies. Simultaneously, this paper will discuss critical issues like personal privacy and data security, providing insights to tackle digital challenges. Through comprehensive analysis, our goal is to offer comprehensive strategic guidance for the field of new media operations, empowering organizations and individuals to achieve effective communication and brand building in the context of globalization and technological innovation.

2   DEFINITION AND DEVELOPMENT OF NEW MEDIA OPERATIONS

New media operations, as a form of communication practice in the digital environment, involve planning, publishing, promoting, managing, and monitoring content using online platforms (especially social media) and tools (Kosterich & Ziek, 2020; Quandt et al., 2020) [11][12]. This process encompasses various aspects, including content marketing, user interaction, and data analysis, with the ultimate goal of building brand influence and retaining user loyalty through effective content dissemination strategies.

To explore the current landscape of social media operations research, we conducted a keyword frequency analysis by searching relevant literature in the SCI and SSCI databases via Web of Science (WOS). Leveraging the bibliometrix package in RStudio, we examined the frequency of keywords in scholarly articles.

The results underscore the central role of "social media" as a research subject, emphasizing its significance in modern communication, information dissemination, and media environments (See Fig. 1). Frequent references to "communication", "impact", and "internet" indicate that research delves into social media's wide-ranging effects on users and society. Keywords like "behavior", "management", and "media" highlight interest in analyzing user behavior and managing media platforms. Attention to

technological aspects is evident through terms like "information", "model", "online", and "technology". Notably, specific user groups such as "adolescents" and "children" receive special consideration. The appearance of "education", "knowledge", and "scheme" underscores research interest in leveraging social media for educational and knowledge dissemination. Overall, this keyword analysis provides insights into social media research's complexity and dynamic evolution.

Fig. 1. Word frequency graph in the field of new media operations research

2.1   Concept and Key Characteristics

NMO are a comprehensive suite of activities within the digital media landscape, involving the ideation, production, distribution, and management of content via online platforms. These operations aim to solidify brand identity, extend influence, and cultivate consistent user engagement (Crespo et al., 2020; Jost, 2023) [13][14].

Content creators in NMO face the challenge of crafting content that resonates with user preferences and is distributed effectively to foster community engagement. Interactivity and user participation are fundamental to NMO, as they enhance the user experience and provide operators with critical feedback. Operators must therefore strategize to encourage active user involvement.

Data analysis and operational refinement are essential for NMO success. By evaluating user behavior, operators can tailor content and marketing strategies to user needs, thereby optimizing content and enhancing the user experience.

2.2 Historical Development and Current Trends

The origin of new media operations can be traced back to the rapid development of the internet and digital technologies. Driven by social media and mobile internet, new media operations have gradually become essential means for organizations and businesses to disseminate information and engage with users. Initially, new media operations primarily focused on content creation and sharing. However, as technology advances and user behavior evolve, new media operations have shifted toward more personalized content delivery and increased emphasis on data analysis and user interaction (Yujie et al., 2022) [15].

Within the field of new media operations, Co-occurrence Network analysis provides profound insights into the complex interactions between key concepts (See Fig. 2). Betweenness centrality analysis reveals certain nodes, such as "internet" and "care," playing critical roles in connecting different research topics or concepts. These nodes act as bridges, suggesting their vital role in integrating various parts of the research domain. Additionally, high values of closeness centrality indicate that nodes like "behavior," "adolescents," and "prevalence" hold central positions in the information dissemination process. These nodes are crucial because they can rapidly communicate with other nodes in the network, highlighting their centrality and influence across diverse research topics.
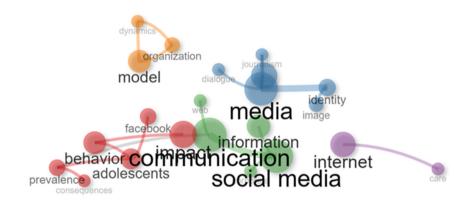

Fig. 2. Co-occurrence network graph in the field of new media operations research

Furthermore, the PageRank metric emphasizes the importance of nodes like "media" and "adolescents." Their prominence results from strong associations with multiple other keywords within the network. This metric not only underscores their individual significance but also implies their critical role in facilitating the exchange of research ideas and knowledge dissemination. Cluster analysis provides insights into the internal relationships within research topics or subdomains. For instance, concepts like "management," "media," "identity," and "journalism" are grouped together, reflecting their

close connections. These concepts likely involve discussions related to media management and identity expression, indicating tightly related subtopic clusters within the research field.

Overall, this network structure not only reveals the interplay between core issues and key concepts in social media research but also showcases the interconnectedness of user behavior, media management, and technological impact across multiple domains. Such analysis not only maps the complexity of the research field but also points toward interdisciplinary and integrated research directions, offering valuable guidance for future exploration.

3   THE THEORETICAL FOUNDATION OF NEW MEDIA OPERATIONS

3.1   Theoretical Overview

In the dynamic field of new media, the creation and distribution of content must be strategically tailored to target audiences, leveraging diverse formats and optimal timing for maximum reach and engagement. Deep user engagement is achieved through a comprehensive understanding of user behavior and preferences, informed by social media insights and analytics, fostering enhanced interactive experiences and loyalty.

Data analysis in new media transcends content optimization, extending to user profiling, trend forecasting, and decision support, with deep learning and AI enabling efficient big data insights for strategic guidance. Effective management of private domain traffic involves both quantitative growth and qualitative enhancement, through systematic user information management, personalized content delivery, and active community engagement, nurturing a stable and engaged user base.

3.2   Theory Implication for Operations

In the field of new media operations, narrative storytelling and audience analysis are crucial for content creation and dissemination. Ouyang Cheng's work emphasizes customizing content for platforms like Douyin, Bilibili, and WeChat Video Accounts to increase media impact. Private domain traffic, as explored by Wang Yijiao in the "Huari Japanese" case study, is becoming essential in publishing, with strategic content marketing and social media engagement enhancing user interaction and brand loyalty.

"Mimeng" serves as a prime example of self-media's effectiveness in audience retention through personal branding and strategic marketing, as discussed in Wang Xiang's research. Zhang Qingyuan's research into the convergence of new media highlights the necessity for publishers to integrate traditional and new media tools to foster content innovation and operational efficiency.

4   NEW MEDIA OPERATIONS STRATEGIES AND PRACTICES

4.1   Key Strategies in New Media Operations

In the domain of new media operations, the crux of success hinges on the creation and meticulous optimization of content. The generation of high-caliber, impactful content is central to captivating and maintaining a user base, thereby significantly bolstering engagement and fostering enduring loyalty. The process of content creation demands a fusion of originality and innovation, coupled with strategic considerations such as Search Engine Optimization (SEO) and Social Media Optimization (SMO), to augment the visibility and shareability of content.

A profound comprehension of the attributes and requisites of target user demographics is quintessential for the formulation of efficacious operational strategies. Through the analytical dissection of user data, one can achieve precision in user targeting, discerning the diverse interests and behavioral inclinations of various user cohorts. This knowledge serves as the cornerstone for the development of content and interaction stratagems that resonate more profoundly with users.

The art of interactive communication stands as a pivotal conduit for nurturing positive user relations. Platforms such as WeChat Official Accounts, Weibo, and short video channels offer fertile ground for engaging users in meaningful dialogue. A proactive stance in responding to user feedback, engaging in discourse, and curating enriching interactive experiences is instrumental in enhancing user identification with the brand and elevating overall satisfaction.

4.2   Case Study and Comparison

In the context of new media, WeChat Official Account operations are pivotal for scientific journals and publishing houses to bolster content dissemination and user interaction. Quality content, interactive design, and data-driven strategies are essential for enhancing user engagement and loyalty. Short video content on platforms like Bilibili and WeChat Video Accounts is instrumental for scientific journals to captivate audiences and convey information effectively, with storytelling enhancing the content's appeal. The self-media model, exemplified by "Mimeng," thrives on originality, interactivity, and emotional connection, establishing a strong brand presence and follower base. Private domain traffic management is crucial for the publishing industry to foster user loyalty and influence, with strategies focusing on content marketing and user management to sustain traffic and engagement.

5   CHALLENGES AND OPPORTUNITIES IN NEW MEDIA OPERATIONS

5.1   Principal Challenges

In the evolving landscape of new media operations, practitioners face multifarious and dynamic challenges. The proliferation of content necessitates the creation of distinctive, high-quality material to capture user interest amidst an abundance of information. The dispersion of user attention across multiple platforms requires targeted, personalized content strategies underpinned by a deep analysis of user behavior. Data privacy and security emerge as critical concerns, with operators tasked with navigating stringent data regulations while engaging in effective data analysis and user profiling. Technological advancements mandate continual learning and adaptation to harness these innovations for operational efficacy.

The ever-changing algorithms of social media platforms dictate the need for operators to persistently refine content strategies to maintain visibility and influence. Commercial imperatives compel a delicate balance between monetization and the preservation of creative autonomy. User interaction presents a growing challenge, with the management of feedback and engagement being key to improving user experience and loyalty. Cross-cultural communication is also paramount, as globalized content dissemination requires strategies that transcend cultural barriers, necessitating a nuanced understanding of diverse communication contexts.

5.2   Future Opportunities

In the rapidly evolving domain of new media operations, technological advancements and the emergence of innovative platforms have provided unprecedented opportunities for content creators and brands. The advent of short video platforms and the integration of WeChat Video Accounts have transformed the paradigms of content presentation and expanded the horizons of user interaction. Platforms like Bilibili and WeChat Official Accounts have broadened the scope for content dissemination, enabling publishers and self-media practitioners to reach a wider audience.

The contemporary era of new media is characterized by a commitment to content innovation, as exemplified by the "Huari Japanese" new media matrix, which has successfully engaged and retained a specific audience segment through cutting-edge content strategies. This innovation extends beyond mere variety in form and theme, encompassing a thorough exploration of user preferences and the application of data analytics to fine-tune content strategies.

Moreover, the focus of new media operations has shifted from conventional relationship management to the development of deeper user connections. This shift requires media operators to prioritize user interactions and personalized services, thereby fostering stronger and more enduring user relationships. Such deep engagement allows media operators to acquire a nuanced understanding of user needs, provide highly relevant and valuable content, and thus maintain a competitive advantage in the dynamic new media landscape.

6   CONCLUSION

Future research in new media should concentrate on the impact of artificial intelligence and big data on content creation and distribution, as well as the adaptation of operational strategies to technological advancements while preserving content integrity and user engagement. The integration of scientific journals with social media could be explored to enhance content visibility and interactivity, utilizing algorithmic recommendations and user behavior analysis for optimized distribution.

Investigations into content innovation on short video platforms are warranted, focusing on novel formats that appeal to younger demographics, integrating visual and interactive elements for educational and engaging scientific content. Research on private domain traffic should examine effective operation and monetization strategies in new media, emphasizing the construction of brand communities and personalized content to optimize user experience.

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