AI-Driven New Media Interactive Communication Modes and User Stickiness Improvement Strategies

Xiaodan Jin

Liaoning Media University, Shenyang, Liaoning, 110000, China

Abstract

Against the background of artificial intelligence technology being fully integrated into the new media industry, the traditional interactive communication modes of new media have gradually failed to meet users' increasingly personalized, real-time and immersive needs, and the cultivation and improvement of user stickiness has entered a new stage. Taking the in-depth integration of AI technology and new media communication as the main line, this paper systematically analyzes the enabling logic and reform path of AI technology for new media interactive communication by adopting literature research and theoretical construction methods. On the basis of sorting out relevant theoretical foundations, this paper constructs an interactive communication system and a user stickiness improvement framework driven by AI. The research shows that AI technology has fundamentally changed the form and efficiency of new media interaction through core capabilities such as user portrait construction, intelligent content distribution, real-time interactive response and data closed-loop optimization, which can effectively enhance users' sense of participation, belonging and continuous use intention. Based on technical logic, communication logic and user demand logic, this paper proposes a complete reconstruction plan of interactive communication mode, and puts forward user stickiness improvement strategies from four levels: content supply, interactive experience, social connection and long-term operation. The research can provide theoretical reference and practical basis for new media platforms to optimize communication mechanisms and enhance user retention and platform competitiveness in the intelligent era.

Keywords

AI Technology; New Media; Interactive Communication; User Stickiness; Intelligent Communication.

1. Introduction

The rapid iteration and popularization of artificial intelligence technology are profoundly reshaping the production mode, communication structure and user relationship of the new media industry. The continuous maturity of big data, algorithm models, natural language processing, computer vision, virtual digital humans and other technologies has promoted the transformation of new media from traditional one-way communication and shallow interaction to precise, personalized, intelligent and immersive communication. In the current increasingly competitive environment of the new media market, user attention has become the scarcest resource. User stickiness is not only the core indicator to measure the platform's communication effect, but also the key factor determining the platform's sustainable development[1].

Traditional new media interaction models generally have problems such as homogeneous content, single interaction form, lagging feedback mechanism and weak user emotional connection, which are difficult to maintain long-term user attention and continuous

participation. With the intervention of AI technology, the underlying logic of new media interactive communication has changed, from platform-centered to user-centered, from standardized push to personalized service, and from passive response to active interaction[2]. These changes have created new possibilities for interactive mode innovation and user stickiness improvement. In this context, it is of great theoretical value and practical significance to systematically study the AI-driven new media interactive communication mechanism and explore scientific and effective user stickiness improvement strategies.

Focusing on the main line of AI technology empowering new media interactive communication, this paper explains the current situation and core characteristics of technology application, builds a theoretical support framework, constructs a complete interactive communication mode, and proposes feasible stickiness improvement strategies, so as to provide reference for the intelligent transformation of the new media industry.

2. Current Situation and Characteristics of AI-Driven New Media Interactive Communication

The application of artificial intelligence in the field of new media has been upgraded from an auxiliary tool to a structural driving force, covering the whole chain of content production, precise distribution, real-time interaction, data monitoring, risk control and so on[3]. The algorithm recommendation system realizes efficient matching between content and users; intelligent customer service, virtual anchors and AI dialogue assistants greatly improve the interactive response speed; the analysis model based on user behavior data provides accurate support for platform operation decisions[4]; and immersive interactive technology further enriches users' sensory experience and participation forms[5]. At present, short video platforms, social platforms, information clients, live broadcast platforms and so on have implemented AI interactive functions on a large scale, and the forms of new media interaction are constantly innovating.

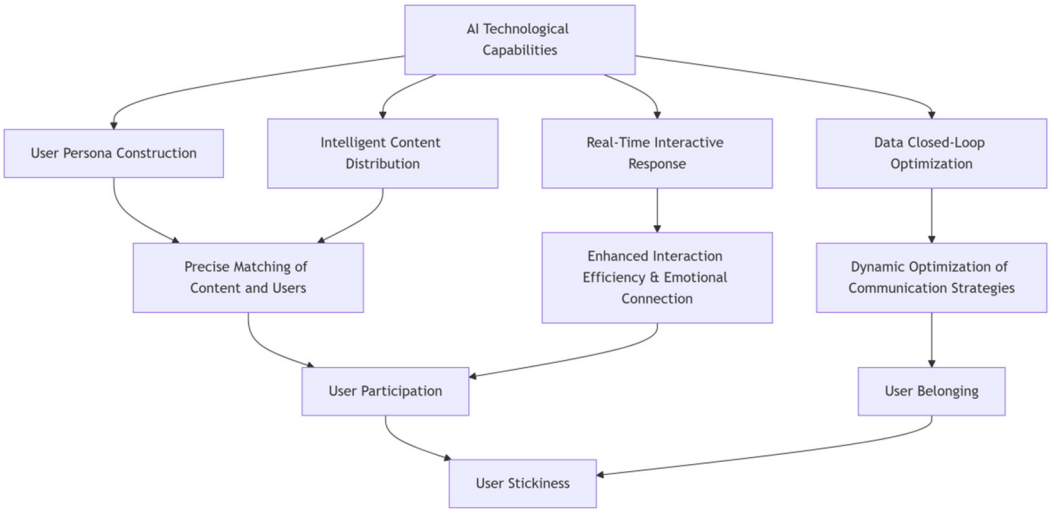

Figure 1. AI-Driven Technology Empowerment Logic for New Media Interactive Communication

Enabled by technology, AI-driven new media interactive communication presents distinctive characteristics. The first is accuracy. The platform realizes personalized matching of content and interaction modes through multi-dimensional user portraits, greatly improving information access efficiency. The second is real-time performance. The AI system can quickly capture user behaviors and give instant feedback, forming a smooth interactive experience.

The third is intelligence. The system can autonomously learn user preferences, continuously optimize recommendation logic and interaction strategies, and achieve dynamic adaptation. The fourth is immersion. With the help of digital humans, virtual scenes and sensory simulation technologies, users can obtain a stronger sense of participation and substitution[6]. The last is socialization. AI strengthens the connection between users and between users and the platform with interaction as a link, promoting the stability and continuation of communication relationships[7]. These characteristics together constitute a new paradigm of new media interactive communication in the intelligent era.

3. Theoretical Basis and Communication Mode Construction

The research on AI-driven new media interactive communication is based on the integration of multi-disciplinary theories, mainly including Uses and Gratifications Theory, Interaction Ritual Chain Theory[8], Personalized Communication Theory and Data-Driven Decision-Making Theory. Uses and Gratifications Theory emphasizes taking user needs as the core. AI technology improves user satisfaction by accurately matching information, entertainment, social and emotional needs. Interaction Ritual Chain Theory points out that continuous and stable interaction can strengthen emotional resonance and form a solid user connection. Personalized Communication Theory relies on algorithms to realize differentiated content supply, reducing users' cognitive cost and improving acceptance intention. Data-Driven Theory takes user behavior data as the basis to realize dynamic optimization of communication strategies. These theories jointly provide support for the construction of interactive communication mode.

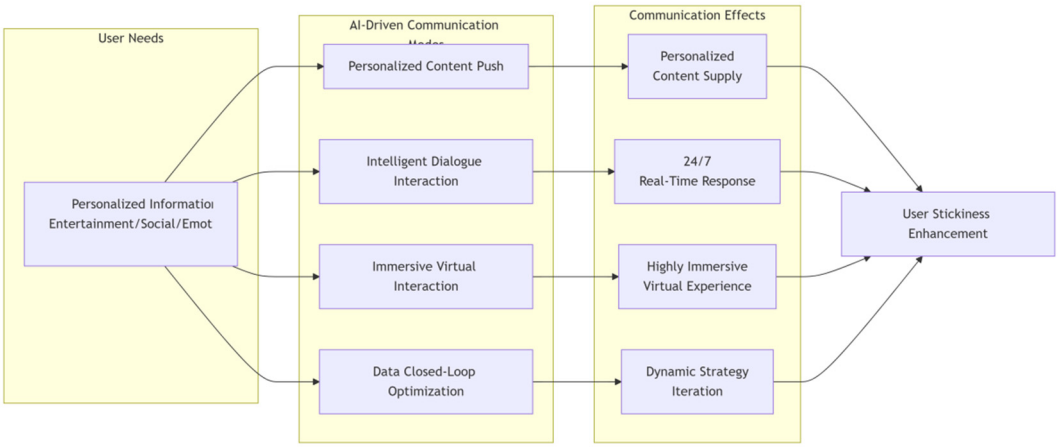

Figure 2. AI-Driven New Media Interactive Communication Mode System

On the basis of theory, combined with AI technical capabilities and new media application scenarios, this paper constructs a complete AI-driven new media interactive communication mode system. This system takes user needs as the core orientation and AI technology as the underlying support, including four core modes: personalized content push, intelligent dialogue interaction, immersive virtual interaction, and data closed-loop optimization. The four modes cooperate with each other, covering the whole process from content delivery and real-time interaction to experience optimization, forming a complete closed-loop of intelligent interactive communication. Among them, the personalized content push mode relies on algorithms to accurately match user preferences to achieve personalized content delivery for thousands of people, solving the problem of homogeneous communication in traditional communication. The intelligent dialogue interaction mode realizes all-weather real-time

response with the help of AI assistants and virtual digital humans, improving interaction efficiency and emotional connection. The immersive virtual interaction mode integrates AI with VR/AR and digital human technology to create a highly participatory virtual scene experience and enhance user immersion. The data closed-loop optimization mode dynamically adjusts communication strategies through real-time monitoring of user behavior data to achieve continuous iteration and optimization. The four modes reconstruct the logic of new media interactive communication from different dimensions, providing core support for improving user stickiness.

4. Strategies for Improving User Stickiness Driven by AI

With the support of AI technology, the improvement of new media user stickiness requires a systematic strategy design around four dimensions: content, interaction, social interaction and experience, which is highly consistent with the communication mode constructed above.

At the content level, relying on AI to build refined user portraits to achieve a high degree of matching between content and needs, while avoiding the information cocoon problem caused by excessive homogeneity, and maintaining a balance between personalization and diversity. AI-assisted content creation can improve content quality and timeliness, make content supply closer to user interests and scenario needs, thereby enhancing users' motivation for continuous attention, which is highly consistent with the core logic of the personalized content push mode.

At the interaction level, emotional and anthropomorphic design should be strengthened, AI dialogue logic and expression should be optimized, and the naturalness and empathy of interaction should be improved. By intelligently identifying user emotions and usage scenarios and dynamically adjusting interaction forms, users can obtain a more comfortable and intimate experience. Virtual image and IP creation can further strengthen emotional connection, enabling users to form stable memory and emotional identity with the platform, giving full play to the value of the intelligent dialogue interaction mode.

At the social level, AI can analyze user social relationships and behavioral preferences, design reasonable social tasks and incentive mechanisms, and promote user sharing, interaction and fission. By intelligently recommending friends, communities and interest circles, the platform can help users establish stable social relationships and enhance community belonging. A sound growth system and honor mechanism can further enhance users' enthusiasm for long-term participation and consolidate user stickiness, extending the social value of the immersive virtual interaction mode.

At the experience level, with the help of AI, real-time monitoring of platform operating status and user operation behaviors, automatic optimization of page fluency, interactive paths and feedback efficiency to improve the overall use experience. At the same time, an intelligent risk control mechanism will be established to purify the content ecosystem, reduce the interference of bad information, and create a safe, healthy and comfortable use environment for users, thereby enhancing user trust and retention willingness, providing implementation guarantee for the data closed-loop optimization mode[9].

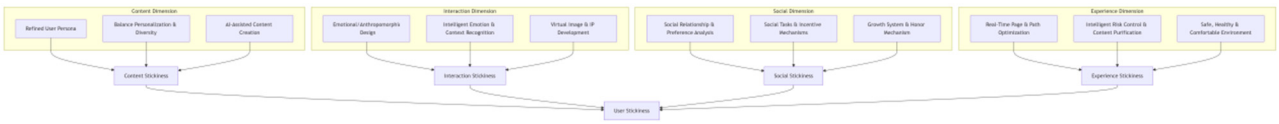

Figure 3. Four-Dimensional Strategy Framework for AI-Driven User Stickiness Enhancement

5. Conclusion

AI technology has brought systematic changes to new media interactive communication, promoting the transformation of communication modes from traditional one-way, homogeneous and passive to precise, personalized, active and immersive. Enabled by intelligent technology, the efficiency, depth and experience of new media interactive communication have been comprehensively improved, laying a solid foundation for user stickiness cultivation.

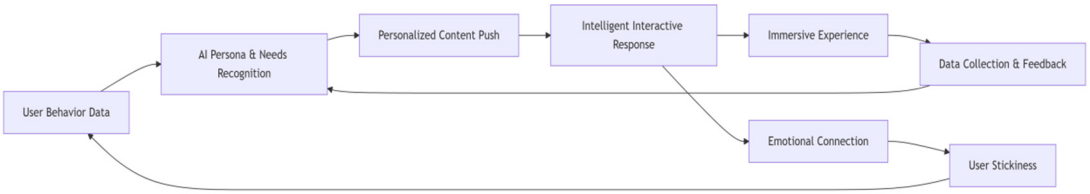

Figure 4. AI-Driven Closed-Loop Process of New Media Interactive Communication

Through theoretical sorting and model construction, this paper clarifies the underlying logic and implementation path of AI-driven interactive communication, and proposes a complete strategy system including accurate content supply, emotional interaction, social incentive and experience optimization. Research shows that reconstructing the interactive communication mechanism with the help of AI technology can effectively enhance users' sense of participation, identity and continuous use intention, and significantly improve user stickiness.

In the future, with the further development of large models, embodied intelligence, metaverse and other technologies, new media interactive communication will present a more diverse and intelligent form. New media platforms should continue to deepen the application of AI technology, continuously optimize interaction modes and operation strategies centered on users, build a more dynamic intelligent communication ecosystem, and achieve long-term stable development.

References

[1] Yu Guoming, Yang Ya. Logical Reconstruction and Promotion Path of User Stickiness Under Algorithm Recommendation[J]. Modern Communication (Journal of Communication University of China), 2022,44(10): 128-134.

[2] Peng Lan. New Media Users in the Intelligent Era: Behaviors, Relationships and Ethics[J]. News and Writing, 2023(01): 5-13.

[3] Hu Yong, Zhang Yuemeng. Generative AI and New Media Content Production: Changes, Challenges and Governance[J]. News and Writing, 2023(05): 23-31.

[4] Zhou Baohua. User Behavior and Relationship in Intelligent Communication: A Data-Based Study[J]. Journalism Review, 2023(02): 36-45.

[5] Li Biao. AI-Driven Immersive Communication: Form, Logic and Ethics[J]. Global Media Journal, 2024,11(01): 78-92.

[6] Wang Run. Research on the Influence of Intelligent Interactive Technology on New Media User Experience[J]. Journalism Lover, 2023(11): 56-60.

[7] Sui Yan, Li Mengqi. The Generation Mechanism of New Media User Stickiness from the Perspective of Interaction Ritual Chain[J]. Modern Communication (Journal of Communication University of China), 2023,45(05): 130-136.

[8] Ding Wei, Zhang Mengzhen. Algorithm Recommendation and User Stickiness: An Empirical Study Based on Uses and Gratifications Theory[J]. Chinese Journal of Journalism & Communication, 2022,44(08): 89-112.

[9] Chen Long, Wang Xi. Influencing Factors and Improvement Strategies of New Media User Stickiness Driven by Data[J]. Journalism Research, 2022(06): 78-87.

[10] Zhang Hongzhong, Liu Pei. The Reform and Paradigm Innovation of New Media Communication in the Era of Artificial Intelligence[J]. News and Writing, 2024(02): 45-52.