A Research on the Effectiveness Enhancement of AIGC Technology in Internet Content Production Driven by Consumer Psychological Needs

Linyuan Gao

Business School, Xinyang Vocational College of Art, Xinyang, China

792249033@qq.com

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Abstract: With the rapid development of Artificial Intelligence Generated Content (AIGC) technology, its application in internet content production has attracted significant attention. This research explores how AIGC technology, driven by consumer psychological needs, enhances content production efficiency and meets the increasingly personalized demands of internet users. By analyzing consumer behavior, content consumption trends, and technological advancements, this study aims to evaluate the effectiveness of AIGC in content creation and its potential to optimize user engagement, increase content diversity, and enhance content relevance. The findings suggest that AIGC technology not only improves the productivity and cost-efficiency of content creation but also enables a more tailored and dynamic user experience, paving the way for the future of content production in the digital age.

1. Introduction

1.1 Background and Significance

In recent years, the landscape of internet content production has undergone a profound transformation, driven by the rapid advancements in technology. Content creation has evolved into a more diversified and personalized endeavor, as platforms and brands increasingly rely on Artificial Intelligence Generated Content (AIGC) to cater to the varied demands of modern consumers [1]. From video production and article writing to image generation, AIGC is playing a central role in reshaping how content is produced and consumed. Consumers, now more than ever, have specific and individualized needs when it comes to the content they engage with, and these demands range from personalized entertainment to educational materials that cater to specific learning styles. Traditional content production models, which often involve manual processes and generalized approaches, struggle to meet these highly tailored demands. As a result, AIGC technology has emerged as a powerful solution to enhance the efficiency and precision of content creation. It holds the promise of not only speeding up the content production process but also improving its relevance and emotional resonance with the audience. This research aims to explore the potential of AIGC to enhance content production efficiency and precision, with a focus on how it can be harnessed to fulfill the psychological needs of consumers, thereby improving user satisfaction and engagement.

1.2 Current Research

Current research on AIGC technology has primarily concentrated on specific content generation areas, such as automatic article writing, image creation, and video generation. Both domestic and international studies have demonstrated the potential of AIGC in various content-related industries, particularly in news production, short-form videos, and social media content creation. These advancements have notably contributed to improving production efficiency and reducing costs in sectors where large volumes of content are required. AIGC technology has proven especially useful in generating news articles in real-time, producing videos for social media platforms, and curating personalized advertising campaigns, all of which are critical in meeting the ever-growing demand for new content. Despite these advancements, a gap still exists in the research surrounding the interaction

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between consumer psychological needs and AIGC technology. While AIGC is capable of automating content creation, the ability to tailor content to the psychological and emotional preferences of consumers remains underexplored. Understanding how AIGC can align with consumer psychology to produce content that not only meets informational needs but also resonates emotionally is key to unlocking its full potential in optimizing content production.

1.3 Research Purpose and Methods

The primary aim of this research is to investigate how AIGC technology can enhance internet content production by aligning it with consumer psychological needs. By examining the intersection of consumer behavior, emotional engagement, and content generation, this study seeks to determine the effectiveness of AIGC in producing personalized and emotionally resonant content. The research will employ a combination of literature review, case studies, and consumer behavior analysis to assess the capabilities and limitations of AIGC in various content production contexts. Through literature analysis, the study will examine existing research and theoretical frameworks surrounding AIGC technology and its applications in content production. Case studies will be used to explore real-world examples of AIGC implementation across different industries, allowing for a deeper understanding of its practical impact. Additionally, consumer behavior analysis will help to identify how AIGC-generated content influences user engagement, satisfaction, and emotional responses. The study will evaluate how well AIGC meets the psychological needs of users, focusing on its impact on content production efficiency, content quality, and overall user experience. Ultimately, the research aims to provide insights into how AIGC can be leveraged to create content that is not only efficient and cost-effective but also highly relevant and emotionally engaging for users.

2. The Impact of Consumer Psychological Needs on Internet Content Production

2.1 Personalized Needs

As information technology continues to evolve at an unprecedented pace, consumers are becoming more accustomed to seeking personalized and tailored experiences across all aspects of their lives, particularly in the realm of content consumption [2]. The traditional methods of content creation, which often rely on broad, generalized strategies aimed at appealing to a wide audience, have proven insufficient in addressing the complex and diverse needs of modern users. In response to this shift, AIGC (Artificial Intelligence Generated Content) technology has emerged as a powerful tool capable of crafting highly personalized content that caters to the unique preferences, tastes, and interests of individual consumers. By leveraging advanced deep learning algorithms and sophisticated data analysis techniques, AIGC systems are able to process vast amounts of user data, uncovering specific patterns, behaviors, and preferences that can be used to generate content that resonates with each consumer on a personal level. This dynamic approach to content creation not only enhances the relevance and appeal of the content but also fosters greater user engagement, satisfaction, and long-term loyalty. As a result, consumers are more likely to engage with and share content that directly aligns with their individual needs and desires, making the personalization of content a key driver of success in the digital age.

2.2 Emotional Needs

In today's fast-paced and often impersonal digital landscape, consumers are placing an increasing emphasis on the emotional impact of the content they interact with, in addition to its functional and informational value. This shift highlights the importance of emotional engagement as a core component of the user experience [3]. A growing body of research suggests that emotional connections with content not only enhance the overall user experience but also drive higher levels of engagement, trust, and brand loyalty. In response to this shift, content creators must make a concerted effort to understand and address the emotional needs of their target audiences. AIGC technology is uniquely positioned to help in this regard by analyzing user data, including emotional characteristics, behavioral patterns, and interaction histories, to generate content that strikes an emotional chord with

the audience. Through the identification and understanding of subtle emotional cues such as tone, sentiment, and context, AIGC can produce content that is not only informative but also emotionally resonant. Whether through creating personalized messages, empathetic storytelling, or content that reflects users' values and aspirations, AIGC enables content creators to form deeper emotional bonds with their audience. This emotional connection plays a crucial role in building a loyal, engaged user base, as consumers are more likely to return to and recommend brands that make them feel understood and valued. By aligning content with users' emotional needs, businesses can foster stronger customer relationships and cultivate a sense of emotional loyalty and brand advocacy, which in turn contributes to long-term success.

2.3 Timeliness Needs

In the age of digital transformation and information overload, the demand for timely, relevant, and up-to-date content has reached new heights. Consumers now expect instant access to information that is not only accurate but also current and responsive to the latest trends and events [4]. From breaking news to social media updates, the desire for immediate and relevant content has reshaped the way information is consumed and shared. In this environment, AIGC technology provides a crucial solution to meet the growing need for speed and relevance in content creation. By harnessing the power of artificial intelligence, AIGC systems can rapidly generate large volumes of high-quality content at an extraordinary pace, allowing businesses, media outlets, and content creators to deliver real-time updates, breaking news, and trending topics without delay. The ability to quickly produce and distribute content tailored to current events, consumer interests, or ongoing developments is essential in maintaining a competitive edge in industries where timeliness is a key factor. In sectors such as news, entertainment, marketing, and e-commerce, AIGC technology enables companies to stay ahead of the curve, ensuring that they can meet the evolving demands of their audiences. By empowering businesses to provide content that is not only relevant but also delivered in real time, AIGC helps to strengthen relationships with consumers, increase engagement, and ensure that brands remain visible and top-of-mind in an increasingly fast-paced digital world. Furthermore, by streamlining content production processes, AIGC enables businesses to maintain a constant flow of fresh, engaging content, ensuring they stay relevant and competitive in an ever-evolving digital landscape.

3. Applications of AIGC Technology in Internet Content Production

3.1 Automated Content Generation: Meeting the Need for Instant Gratification

AIGC technology, driven by advances in natural language processing (NLP), image generation, and voice synthesis, automates the creation of diverse content types—including articles, videos, and voiceovers—with remarkable speed and efficiency [5]. Beyond mere convenience, this immediacy satisfies a growing consumer psychological trend: the need for instant gratification. In an era where attention spans are short and content consumption is rapid, users expect immediate access to relevant, high-quality information. AIGC responds to this psychological demand by delivering tailored content in real-time, helping brands maintain continuous engagement. This not only streamlines production but also aligns with consumer expectations for on-demand experiences, reinforcing a sense of responsiveness and relevance.

3.2 Content Diversification and Customization: Catering to Emotional and Cognitive Preferences

A key strength of AIGC lies in its ability to generate emotionally resonant and cognitively aligned content through deep user profiling [6]. By analyzing behavioral data—such as browsing habits, interaction frequency, and even sentiment patterns—AIGC systems can infer users' emotional states and cognitive styles. This enables platforms to deliver content that not only reflects users' interests but also speaks to their moods, values, and aspirations. For example, emotionally upbeat visuals and empathetic language may be used for users showing signs of fatigue or stress, offering them a

psychological lift. In e-commerce scenarios, product descriptions can be adapted to reflect either rational decision-making (emphasizing features and functionality) or emotional appeal (focusing on aesthetics and lifestyle fit), depending on user personality traits. This nuanced customization fosters a sense of being understood, deepening consumer trust and emotional loyalty.

3.3 Real-Time Updates and Optimization: Responding to Psychological Triggers

The modern consumer is highly reactive to real-time developments, from breaking news to social trends. AIGC technology enables dynamic content optimization that keeps pace with these psychological triggers [7]. Whether it's reshaping content to reflect trending topics or aligning messaging with shifts in public sentiment, AIGC helps brands demonstrate cultural awareness and empathic agility. This responsiveness strengthens a user's sense of relevance and inclusion, as they feel the content reflects their current world. Additionally, by analyzing engagement metrics such as click-through rates and emotional tone in feedback, AIGC can refine its outputs to better match the motivational states of different audiences—curiosity, validation, excitement, or belonging—thereby boosting content impact and psychological resonance.

4. The Role of AIGC Technology in Enhancing Content Production Efficiency

4.1 Improving Production Efficiency: Enabling Timely Emotional Engagement

Traditional content creation cycles often fail to meet consumers' psychological expectations for instant emotional responsiveness. AIGC technology significantly accelerates content production by automating various stages such as ideation, writing, editing, and visual generation [8]. This enhanced speed allows content to be released precisely during the emotional attention window—the brief period when users are most emotionally engaged with a trending topic or event. By leveraging this window, businesses can more effectively trigger emotional resonance, enhancing the perceived value and relevance of their content. For instance, when social media users are actively discussing a viral trend, AIGC can generate responsive content within minutes, fulfilling users' need to feel heard and accompanied, and strengthening emotional connection and platform loyalty.

4.2 Reducing Production Costs: Reinvesting in Empathic User Experience

While AIGC reduces the reliance on labor-intensive tasks and lowers production costs [9], these savings do more than improve operational efficiency—they enable businesses to reinvest in user experience design that fosters emotional connection. Resources can be redirected toward enhancing interactivity, sensory immersion, and narrative depth, all of which contribute to empathic engagement. For example, AIGC can tailor micro-content (like tweets, short videos, or comment replies) to reflect individual users' psychological preferences, delivering content that feels personally crafted. This not only satisfies the user's desire for recognition and relevance but also fosters a deeper sense of participation and brand affiliation.

4.3 Enhancing Content Accuracy and Relevance: Strengthening Psychological Resonance

In today's information-saturated digital environment, psychological alignment—not just information density—is key to capturing and retaining user attention [10]. AIGC systems analyze extensive user data to build dynamic psychological profiles encompassing interests, cognitive styles, emotional states, and value orientations. This enables the generation of content that is emotionally and cognitively attuned to individual users. For example, users seeking knowledge can be served logically structured, data-rich articles, while users looking for entertainment might receive humorous, vibrant, and conversational content. This personalized matching enhances user engagement, emotional investment, and long-term interaction. Moreover, AIGC's ability to improve content accuracy through data validation reinforces users' perception of credibility and psychological safety, further solidifying trust and loyalty toward the platform.5. The Impact of AIGC Technology on User Experience.

5. Enhancing User Experience through AI-Generated Content

5.1 Enhancing Personalized Experience

AIGC technology plays a pivotal role in enhancing the personalized experience of users by generating content tailored specifically to their behavior, interests, and psychological needs. Unlike traditional content delivery methods, which often present generalized material to a broad audience, AIGC technology uses data analytics to craft content that directly aligns with individual user profiles. This personalization ensures that users encounter content that resonates with their unique preferences, whether it be in the form of articles, videos, or product recommendations. By delivering more relevant and engaging content, AIGC improves the overall user experience, leading to higher levels of satisfaction and deeper engagement with the platform. Moreover, as users encounter content that speaks to their personal tastes, they are more likely to return to the platform, fostering greater loyalty. Over time, this personalized approach builds stronger relationships between the platform and its users, driving long-term engagement and increasing the platform's value in users' daily lives.

5.2 Improving Interaction Experience

AIGC technology significantly improves the interaction experience across digital platforms by utilizing advanced techniques such as natural language processing (NLP) and image recognition [11]. These technologies allow for more natural and seamless communication between users and platforms, enhancing user satisfaction and overall usability. For example, on social platforms, AIGC can automatically generate comments, responses, or posts that align with the tone and context of user interactions, creating a more fluid and personalized communication experience. Users can interact with the platform in a way that feels more intuitive, with AI-generated content responding in real time to their input. This encourages deeper engagement by making interactions feel more meaningful and relevant. In customer service scenarios, AIGC can further enhance the interaction experience by providing immediate, contextually appropriate responses to user queries, reducing wait times and improving service efficiency. As a result, AIGC technology fosters greater user participation, collaboration, and communication, enhancing the overall value of the platform as an interactive space.

5.3 Strengthening Emotional Connection

AIGC technology has the ability to create content that not only meets users' informational needs but also connects with them on an emotional level, strengthening the emotional bond between users and the platform. By analyzing users' emotional responses and preferences, AIGC can generate content designed to elicit specific emotions, whether it be joy, excitement, empathy, or nostalgia. This emotional resonance makes content more memorable and impactful, ensuring that users feel a deeper connection to the material they consume. For example, AIGC can generate heartfelt stories, motivational messages, or emotionally charged advertisements that evoke strong emotional reactions from users. By fostering this emotional connection, AIGC enhances the value of the content beyond its functional role, making it an integral part of the user's emotional landscape. This emotional engagement not only increases the likelihood of content sharing and recommendation but also contributes to stronger brand loyalty and consumer trust. Ultimately, AIGC's ability to satisfy users' emotional needs while they consume information is a powerful tool for creating lasting relationships between users and content creators.

6. Conclusion

This study explored the application and effectiveness enhancement of AIGC technology in internet content production, driven by consumer psychological needs. The findings show that AIGC technology offers significant advantages in automating content generation, improving production efficiency, reducing costs, and enhancing content personalization and accuracy. Furthermore, by providing real-time updates, emotional resonance, and better user interaction, AIGC technology optimizes user experience and strengthens emotional connections. As AIGC technology continues to evolve and consumer psychological needs further develop, internet content production will usher in

an era of more personalized and customized content. The study suggests that content producers should fully leverage AIGC technology and tailor content strategies to meet consumer psychological needs, thereby enhancing market competitiveness and user satisfaction.

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