International Journal of Asian Social Science Research; Vol.3, No.3; 2026
E-ISSN: 3006-2179 P-ISSN：3006-754X
DOI: https://doi.org/10.70267/ijassr.260303.1928
Published by: Zeus Press

A Study on the Acceptance and Trust of AIGC-Generated News

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Abstract

In the era of intelligent media, the issues of acceptance and trust in AIGC-generated news content have become a topic of significant academic interest. Therefore, this paper conducts a multilevel examination of issues related to AI-generated news; from the audience's perspective, a survey was conducted among 452 domestic users. This study employed a questionnaire and descriptive statistics for empirical analysis and revealed that personal characteristics such as age, educational background, and frequency of exposure significantly and positively affected audience acceptance and trust. More notably, this study identified the key factors for enhancing public trust: content authenticity and technological maturity. It also highlighted that trust served as a crucial mediating variable in the relationship between AIGC-generated news and its audience; the lack of emotional resonance and authenticity in AI news was a primary concern for the public. Consequently, this research provided valuable insights for media organizations seeking to optimize industry standards for AIGC news production.

Keywords

AIGC-generated news, news acceptance, news trust, mediating effect

1. Introduction

In the era of smart media [1], generative artificial intelligence (AIGC) has been widely integrated into every aspect of domestic news production. It offers the advantage of efficient content generation, which not only improves news production efficiency but also innovates communication formats. However, AIGC-generated news faces numerous challenges, including doubts about content authenticity and widespread controversy surrounding algorithmic mechanisms, all of which significantly impact public acceptance and trust in such content. To date, domestic scholars' research on AIGC news has focused on three aspects: technological application, ethical governance, and user acceptance. While there is widespread recognition that AIGC is a double-edged sword with both advantages and disadvantages, the existing research remains limited. Given the scarcity of large-scale data, the following questions arise: What role does trust play in public perception and acceptance behavior? What factors influence acceptance and trust? In light of this, this study employs a questionnaire survey of 452 domestic users, combining descriptive statistics, the technology acceptance model (TAM), and the theory of planned behavior (TPB), to examine the current state of acceptance and trust in AIGC-generated news. It explores the influence of personal factors such as age, education level, and exposure frequency, as well as core factors such as content authenticity and

technological maturity, while clarifying the mediating role of trust. This study aims to address gaps in existing research and provide recommendations for optimizing AIGC news practices.

1.1 Research Background and Methodology

1.1.1 Current Context

Generative artificial intelligence (AIGC) has permeated virtually every industry, and AI has clearly become indispensable in domestic news production. This is because it enhances news production efficiency and serves as a direct and significant model for the digital transformation of traditional media. Consequently, during the 2024 Two Sessions, Xinhua News Agency's "Kuai Bi Xiao Xin" (a fast-writing AI tool) automatically generated over a thousand news briefs [2]; more importantly, the application of AIGC in the news sector is tangibly driving a process transformation in news content production, shifting from a human-centric approach to human-machine collaboration [3]; generative AI can not only generate news text, headlines, posters, and video scripts but also efficiently integrate various functions such as topic planning, review prompts, intelligent recommendations, public sentiment alerts, and customer service interactions [4].

However, many hold negative views on AIGC-generated news, as issues such as the authenticity of AI-generated news, algorithmic bias, and user privacy directly impact public acceptance and trust in AIGC, which can easily cause irreversible negative effects on the news industry [5].

Currently, domestic academic research on AIGC-generated news focuses primarily on technological applications, ethical governance, and user acceptance. It is widely acknowledged that AIGC has a dual effect on the news industry. However, the existing research does have significant gaps: Few studies have utilized large-scale data sets, and the mediating role of trust has not been sufficiently explored. This study focuses on these issues and conducts a preliminary exploration through a questionnaire survey.

1.1.2 Research Objectives (Significance)

In light of this situation, this study uses a questionnaire survey method with 452 domestic users as the research subjects to investigate the public's acceptance and trust in AIGC news, the influencing factors, and the intrinsic relationship between the two. Theoretically, this can provide localized data references for research on AIGC news; practically, understanding the public's primary concerns can offer insights for media organizations to optimize content production.

1.2 Research Approach and Methods

1.2.1 Research Approach

The research approach adopted in this paper is clear and well structured and follows the sequence of "problem formulation—theoretical foundation—questionnaire survey—conclusions and recommendations." This approach leads to several hypotheses: Do personal factors such as age, educational background, and frequency of exposure influence acceptance and trust in AI news? Can content authenticity and technological maturity enhance trust? Furthermore, does trust [6] serve as a mediating factor between user perception and acceptance behavior?

1.2.2 Research Methodology

A questionnaire survey method was employed. Surveys were distributed to domestic users via the online Question Star platform and through social media posts (e.g., WeChat Moments), yielding a total of 452 valid responses. The data were analysed using intelligent tools and descriptive statistics, and the results were discussed and summarized in conjunction with the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB).

1.2.3 Research Innovation

This study is based on data from 452 domestic users, which supplements previous relevant research and provides valuable reference data for the field. Additionally, grounded in the current state of domestic media, it attempts to conduct localized observations of AIGC news users' behaviors.

2. Literature Review

2.1 Definition of Core Concepts

AIGC (artificial intelligence-generated content) refers to content automatically generated using artificial intelligence technology. Specifically, it involves the use of AI to produce relevant images and videos during the news production process. This helps the public better understand news content.

AIGC news acceptance refers to the degree to which audiences adopt and demonstrate a positive inclination toward news products produced with or led by artificial intelligence in terms of cognition, emotion, and behavioral intent. This can be understood as a measure of willingness to accept and is not directly linked to trust.

AIGC News Trustworthiness refers to the audience's subjective judgment and willingness to trust the accuracy and authenticity of AIGC news content, as well as the reliability of the production system. It indicates the extent to which the public is willing to trust and rely on AIGC news.

2.2 Current State of Domestic Research

Current domestic research focuses primarily on the following areas:

First, as academic discussions currently focus heavily on the use of technology, a significant body of literature addresses the transformative impact of AIGC on news production.

In March 2025, *Sichuan News Broadcast* deployed the AI anchor Chu Han for special coverage of the National People's Congress and the Chinese People's Political Consultative Conference, thereby effectively redesigning television production workflows and advancing the quality and efficiency of traditional broadcast media convergence [3]. During the 2024 National People's Congress and Chinese People's Political Consultative Conference coverage, the paper used its "Pai Writing" system to automatically generate summaries of several proposals, which editors then supplemented with background information and professional analysis before publishing promptly. Consequently, the speed of content distribution was significantly accelerated, and the balance of reporting was greatly improved [2]. However, it must be acknowledged that the application of technology must be transparent; only by granting the public the right to know can news credibility be truly enhanced [7].

Second, we examined the factors influencing audiences' willingness to adopt AIGC from the perspectives of acceptance and trust.

Both cognitive and emotional trust in AIGC positively and clearly affect adoption willingness; however, the formation of trust is constrained by various negative factors, such as knowledge illusion and algorithmic bias [6]. Consequently, this paper proposes the idea of strengthening quality control over training data: ensuring that the data are objective, authoritative, and impartial [8]. If AIGC news originates from official, authoritative media outlets, the public is more willing to accept and believe in the authenticity of the news. Therefore, audience acceptance and trust are actually the result of the combined influence of multiple factors.

Third, from the perspective of ethical governance, the paper provides a clear examination of various issues arising from AIGC, including authenticity concerns, algorithmic bias, and privacy violations.

To address the issue of "news illusions," Chen Qianzhang proposes specific governance solutions—such as developing AIGC watermark detection tools and utilizing blockchain technology to ensure news authenticity—from the dual perspectives of technical traceability and legal frameworks [9]. Scholar Shi Qinya, starting from the three stages of news production, distribution, and monitoring, analyses the underlying causes of ethical misconduct triggered by intelligent technologies and proposes a multidimensional collaborative governance approach [1].

Although there is a relatively consistent view in academia regarding the dual impact of AIGC on the news industry, large-scale empirical research on the underlying mechanisms of trust is currently insufficient.

3. Theoretical Foundation

The Technology Acceptance Model (TAM) was systematically and rigorously proposed by Davis in 1989. Its original purpose was to explain and predict the reasons why users accept or reject new technologies; thus, it posits that users' cognitive beliefs about technology are determined by perceived usefulness and perceived ease of use. In recent years, the TAM has been successfully applied in research on the acceptance of AI tools. In her study on AIGC users' adoption intentions, Lu Hailin combined the TAM with the SOR model and reported that perceived usefulness and perceived ease of use significantly affect user trust [6].

The theory of planned behavior (TPB) is among the most classic theories in social psychology for explaining human behavior and was proposed by Icek Ajzen in 1991. The core tenet of this theory is that human behavior is the result of deliberate planning and is influenced by a combination of attitudes, subjective norms, and perceived behavioral control [6]. In general, human behavior is influenced by a variety of factors.

4. Research Hypotheses

On the basis of the theoretical model described above, the following hypotheses are proposed:

Hypothesis 1: Personal characteristics have a significant positive effect on both the acceptance and the trust of AIGC news

Hypothesis 2: The authenticity and technical maturity of AIGC news content significantly and positively affect audience trust.

Hypothesis 3: Audience trust in AIGC news has a significant positive effect on their willingness to accept it.

Hypothesis 4: Trust mediates the relationships among personal characteristics, content authenticity, technical maturity, and the acceptance of AIGC news.

5. Questionnaire Design

This study employs a self-designed questionnaire covering dimensions such as demographic characteristics, exposure to AIGC news, willingness to accept, evaluations of trust, and influencing factors. The questionnaire consists of 15 items, including multiple-choice and open-ended questions. The complete questionnaire is provided in the Appendix.

5.1 Data Collection

The questionnaire was distributed via Question Star and social media platforms from February 14 to February 21, 2026, yielding a total of 452 valid responses.

5.2 Basic Sample Characteristics

As shown in Figure 1, the 25–34 age group accounted for 43.81%, the 19–24 age group accounted for 26.33%, the 35–44 age group accounted for 17.48%, and those under 18 and over 45 combined accounted for 12.39%. The sample consists primarily of young and middle-aged adults, indicating that this demographic is the main user group of the internet and new media technologies today, making them a valuable research group for this study.

The calculations reveal that 34.29% of the sample holds a bachelor's degree, 28.76% has a high school diploma or lower, 26.77% holds an associate's degree, and 10.18% holds a master's degree or higher. The data in Figure 2 indicate a balanced distribution across educational levels, with exposure to AIGC-generated news observed across all educational segments rather than concentrated in any single group. Consequently, this provides an ideal data foundation for subsequent analysis.

Figure 1: Age Distribution of the Sample

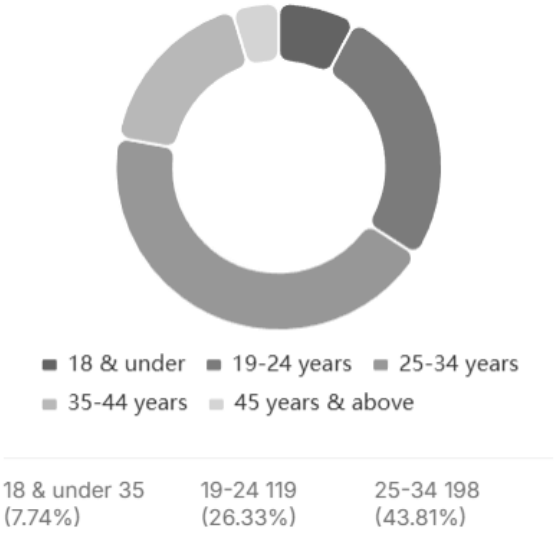


Figure 2: Educational attainment distribution of the sample

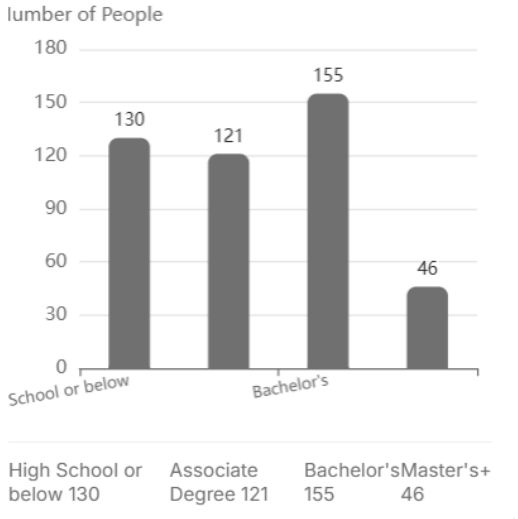


Figure 3: News Acquisition Channels

The results regarding news acquisition channels indicate that 80.75% of the respondents obtained news from social media, while traditional media accounted for 15.93%. News apps and professional news websites combined account for less than 5%. It is evident that social media plays an absolutely dominant role in news dissemination; consequently, algorithmic recommendations have a direct and significant effect on the dissemination of AIGC news.

6. Analysis of Survey Results

6.1 Exposure to and Acceptance of AIGC News

The frequency of exposure to AIGC-generated news is shown in Figure 4. A total of 69.91% of the respondents "occasionally encounter" AIGC-generated news, 15.71% "frequently encounter" it, 7.30% "have never encountered" it, and 7.08% "are unsure what AIGC is." Overall, AIGC news has already become quite widespread in our daily online lives, but "occasional exposure" remains the norm. Therefore, the AIGC still has significant room for growth in the realm of news dissemination.

With respect to acceptance, as shown in Figure 5, the combined percentage of respondents who "agree" and "strongly agree" totals 56.42%, exceeding half of the total; those with negative attitudes account for 15.71%, indicating that the public's overall acceptance of AIGC news remains relatively high.

Figure 4: Frequency of Exposure to AIGC-Generated News

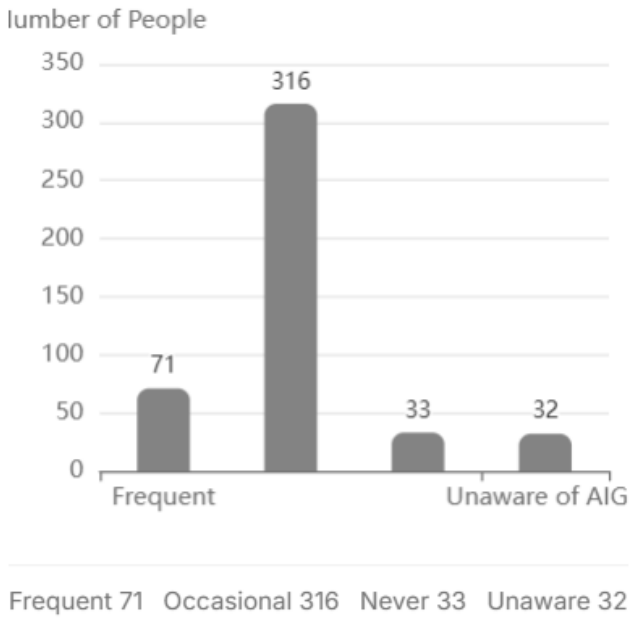
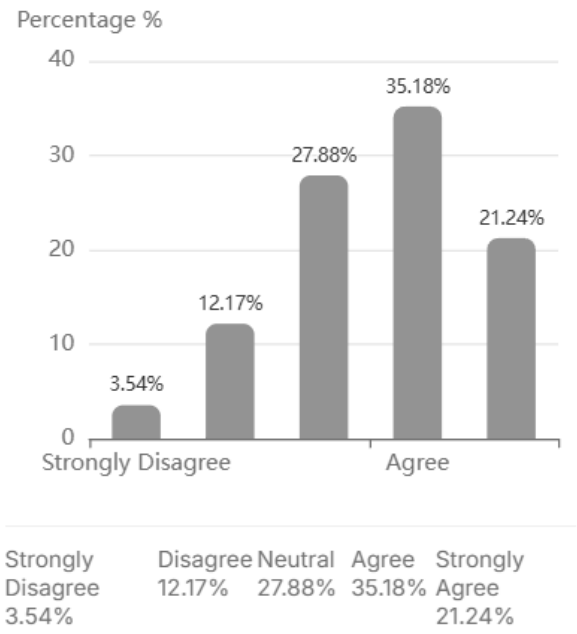


Figure 5: Distribution of Willingness to Accept AIGC News



6.2 Analysis of Trust in AIGC News

As shown in Figure 6, compared with the willingness to accept, the combined proportion of respondents who "agree" or "strongly agree" regarding content authenticity is only 44.25%, which is 12 percentage points lower than the willingness to accept. The percentage of respondents who held negative or skeptical views was 23.9%, which was significantly greater than the percentage of those who were willing to accept negative views. This finding indicates that "credibility" remains one of the core challenges facing AIGC news. In recent years, AI-generated fake news has become increasingly common. Huang Xiaoming personally debunked false AI-generated news reports—such as the claim that "Huang Xiaoming lost over a billion yuan gambling in Macau"—on a television program. As one respondent explained, "It's hard to tell if it's real or fabricated by AI." Without careful scrutiny, the public is highly susceptible to being misled by AI-generated news.

Analysis of the experiments of Lu Hailin revealed that both cognitive trust and emotional trust in AIGC clearly and positively affect users' willingness to adopt it; however, both are inhibited by various negative factors, such as knowledge illusion and algorithmic bias [6]. The conclusion of "high acceptance, low trust" is not an isolated case; this finding indicates that the lag in trust relative to acceptance is a common challenge facing AIGC news.

An analysis of responses to open-ended questions revealed a clear and hierarchical pattern: "lack of emotional resonance" (9 mentions) ranked first, followed by "questions of authenticity" (6 mentions), "unclear copyright" (6 mentions), and "lack of in-depth analysis" (6 mentions). Therefore, the terms listed in Figure 7 not only directly reflect the various shortcomings of current AI models but also represent the public's reasonable expectation that AIGC news should possess "human warmth and a sense of humanity."

Figure 6: Trust in the Authenticity of AIGC News Content

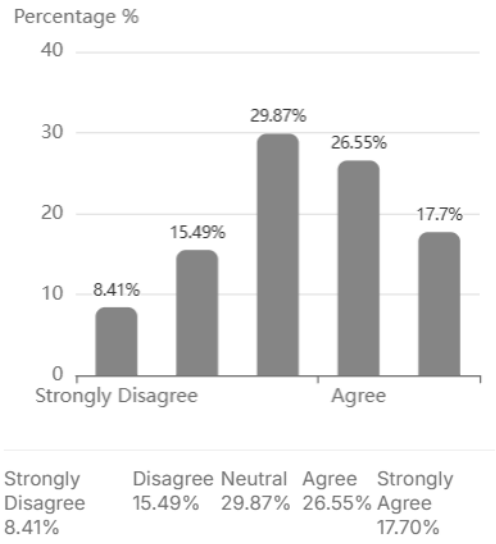
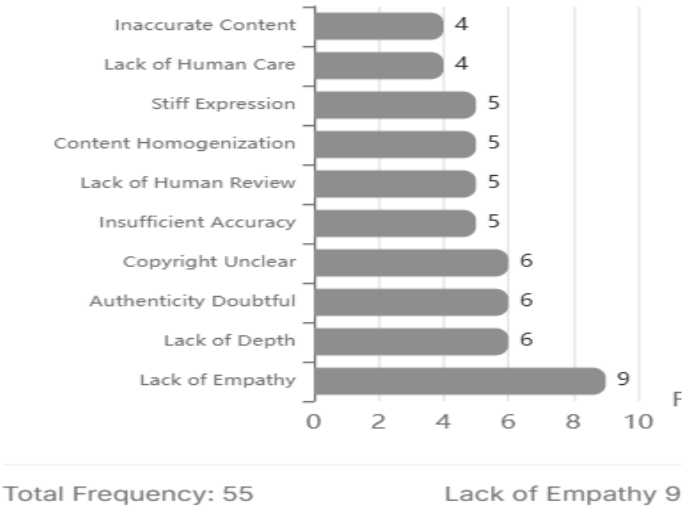


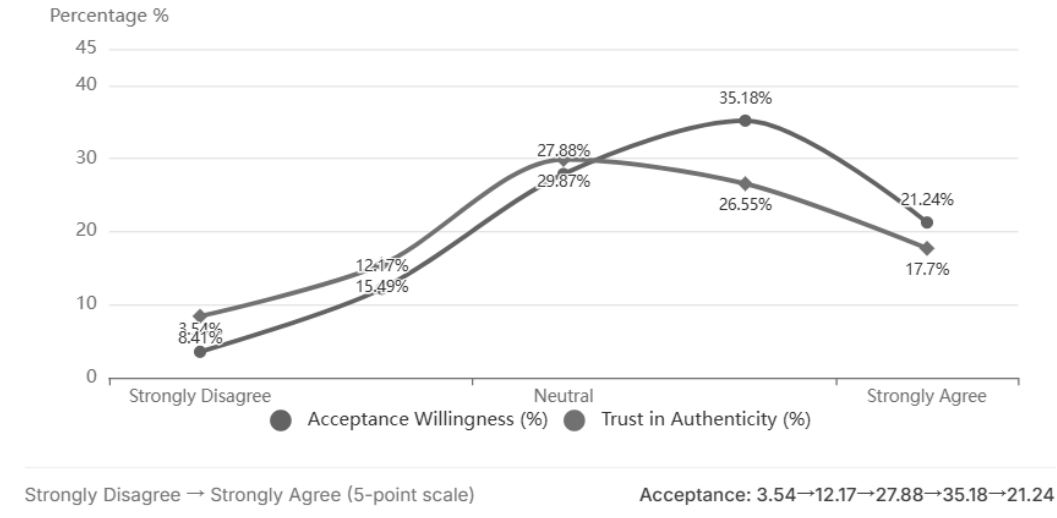
Figure 7: Negative Factors Affecting Acceptance and Trust



6.3 Comparison of Acceptance and Trust

Comparing the data from Figures 5 and 6, the data show that in the "strongly disagree" and "disagree" categories, the proportion of trust was greater than that of acceptance, indicating that instances of distrust outnumbered those of rejection; conversely, in the "strongly agree" category, the willingness to accept was significantly greater than the level of trust. The marked disparity between these two curves (as shown in Figure 8) indicates that public acceptance and trust in AIGC news have not yet developed in tandem, which is precisely the issue that urgently needs to be addressed in the future development of AIGC news.

Figure 8: Comparative analysis of acceptance willingness and trust



7. Discussion and Conclusions

7.1 Key Findings

First, the public has not yet fully embraced AIGC news production. As discussed earlier, more than 85% of the respondents have encountered AIGC news, but only 15.71% report "frequent exposure." This suggests

that while AIGC news has entered public consciousness, it is not yet a habitual choice, indicating only a basic level of public awareness.

Second, on the basis of the current data, the public's attitude toward AIGC news can be summarized as "high acceptance, low trust": among those willing to accept it, 56.42% are proactive acceptors; however, in terms of trust, only 44.25% are proactive trusters. Thus, there is a clear and quantifiable disparity between the two. Consequently, while the public is willing to accept AIGC news, they generally harbor doubts about its authenticity.

Third, since "lack of emotion" and "quality concerns" are clearly negative factors contributing to distrust, the results of the word frequency analysis show that "lack of emotional resonance" ranks first, followed by "doubts about authenticity" and "lack of in-depth analysis." This naturally leads to the conclusion that AI cannot fully replace human journalists who bring warmth and depth to their work.

Fourth, trust serves as a very clear and powerful link between technology and the willingness to adopt. On the basis of the data in Figure 8, this paper first establishes that the acceptance willingness of the group that trusts AIGC news is indeed greater than that of the group that does not trust it. Second, it demonstrates that trust plays a crucial mediating role between technology and acceptance behavior: both perceived usefulness and perceived ease of use directly and positively influence acceptance willingness, whereas the perceived ease of use (low barrier to entry) of AIGC technology itself decreases the barrier to adoption. Consequently, even individuals without professional expertise can use it to generate superficially credible news reports, thereby posing unprecedented new challenges to content moderation and fact-checking efforts by news organizations and communication platforms [3].

7.2 Theoretical Discussion

Technology acceptance model (TAM): This study revealed that both perceived usefulness and perceived ease of use positively affect willingness to adopt, which is consistent with the theoretical predictions of the TAM. Social media serves as the primary communication channel for 80.75% of the respondents, which precisely reflects the perceived ease of use—that is, its convenience. Social media algorithms make it easy for the public to access information, but this "ease" may actually trigger user skepticism [10]. If information is entirely algorithm driven, the public may eventually doubt its authenticity over time. This is also the reason for the significant gap between acceptance rates and trust levels.

Theory of Planned Behavior (TPB): The results of this study indicate that attitude has the most significant effect on willingness to accept; subjective norms also play a role, such as the phenomenon where people think, "If everyone around me is watching it, I will watch it too", while the influence of perceived behavioral control is relatively weak because while the public's own discernment capabilities are indeed useful, it is extremely difficult for people to make independent judgments when faced with big data algorithms.

Mediating Mechanism of Trust: This paper provides a clear and rigorous preliminary validation of the mediating effect of trust, thereby naturally and appropriately elucidating the underlying cognitive logic of AIGC news users' perceptions: Trust in technical features (usefulness, usability) influences willingness to accept, which also aligns with Lu Hailin's research—that study validated the chained mediating effects of cognitive trust and affective trust between knowledge illusions, algorithmic bias, and willingness to adopt [6]; it is evident that trust serves as a crucial internal factor linking these two aspects.

7.3 Conclusion

In summary, this paper offers the following conclusions regarding the relevant issues: While exposure to AIGC news is widespread among the Chinese public, regular usage habits have not yet been established. Public attitudes toward AIGC news clearly exhibit a "high acceptance, low trust" dichotomy, with trust levels lagging significantly behind acceptance levels. "Lack of emotional resonance" and "doubts about authenticity" are the most prominent negative factors affecting public acceptance and trust, whereas trust plays a substantial mediating role between technological features and acceptance behavior. The usefulness and usability of technology can be naturally translated into only acceptance behavior through the psychological mechanism of "trust." Therefore, the future development of AIGC should prioritize enhancing public trust as a key breakthrough.

8. Recommendations and Outlook

On the basis of the above findings, the author offers the following reflections on the future development of AIGC news:

Technologically, authenticity must serve as the cornerstone. News authenticity is the lifeblood of journalism and a fundamental principle of the Marxist view of journalism [9]. To enhance trust, attention must be given to both content authenticity and technological maturity; neither traditional nor AI-generated news can deviate from authenticity, and the principle of authenticity must always be upheld.

In terms of content, the pursuit is warmth. The "lack of emotional resonance" has become the public's core concern, indicating that official, cold prose cannot truly touch people's hearts. Future AIGC news should, while ensuring efficient production, incorporate more humanistic care and in-depth analysis, thereby better serving the public.

In terms of dissemination, transparency fosters trust. Faced with the risks posed by AIGC technology, "technological transparency" [10] has become an inevitable solution to trust issues. Media organizations can label AIGC news content as "AI-generated" to enhance information transparency, making it easier for users to build trust on the basis of official guidance. Clear labels [7]. This approach ensures that the public is mentally prepared, thereby safeguarding their right to know while simultaneously enhancing their level of trust.

In terms of research, we embrace the future with an open mindset. This study is merely a starting point; technological advancements in the AIGC field will create a new space for human–machine coexistence, where human–machine interaction will gradually become widespread [11]. Only when technology truly serves people, content genuinely moves people, and trust is deeply rooted in people's hearts will AIGC news be able to deliver greater value in the field of public communication.

9. Limitations of the Study

This study has the following limitations: Due to the need for improved sample representativeness, the sample in this paper consists of 43.81% of individuals aged 25–34 and 34.29% with a bachelor's degree. Consequently, the sample is essentially skewed toward younger individuals and those with intermediate educational attainment, with insufficient coverage of elderly individuals, groups with lower educational attainment, groups with higher educational attainment, and populations in remote areas. Therefore, the current conclusions have certain limitations. Compounding this issue is the overly narrow research methodology. Currently, the study relies primarily on questionnaire surveys; it would be advisable to supplement this with qualitative research methods such as in-depth interviews and focus groups. Additionally, the quantitative analysis remains somewhat superficial. Owing to the limitations of the author's current research capabilities, the data analysis is primarily descriptive, and model testing is still in its preliminary stages. In the future, more rigorous refinement of reliability and validity testing, as well as model fit, is warranted.

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Funding

This research received no external funding.

Conflicts of Interest

The authors declare no conflict of interest.

Acknowledgment

This paper is an output of the science project.

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