A Review of the Impact of AIGC on User Behavior in Digital Marketing

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Abstract: As an important means for modern enterprises to promote their products and services, the effect of digital marketing is affected by a variety of factors, and the emergence of AIGC technology brings new possibilities for digital marketing, which not only improves the efficiency of marketing but also brings a more personalized and intelligent experience for users. This study will focus on "the impact of AIGC on user behavior in digital marketing" to explore how AIGC technology affects users' purchase decisions, information search behavior, interactive participation, etc. and analyze the mechanism behind it. This study adopts the method of literature review to collect and analyze academic papers, case studies and industry reports in related fields at home and abroad. By combing and summarizing these literatures, this paper will distil the main ideas and conclusions of AIGC's influence on user behavior in digital marketing, and construct the corresponding theoretical framework.

Keywords: aigc, digital marketing, user behavior.

1.   Introduction

With the rapid development of science and technology, artificial intelligence has become a powerful driving force for social progress. Among them, Artificial Intelligence Generated Content (AIGC), as a branch in the field of AI, is gradually changing the face of digital marketing. AIGC can automate the generation of high-quality content through deep learning, natural language processing and other technologies, providing unprecedented opportunities and challenges for digital marketing. However, despite the increasing application of AIGC in digital marketing, research on how it influences user behaviour is still in its infancy and there are many research gaps.

Currently, some studies have begun to explore the application of AIGC in digital marketing and its impact on user behavior. These studies mainly focus on how AIGC improves marketing efficiency, optimizes user experience and promotes user engagement. However, these studies are often limited to specific scenarios or cases and lack systematic summarization and in-depth exploration. In addition, there is a lack of comprehensive and in-depth research on how AIGC influences specific user behaviors (e.g., purchase decision, information search, interactive participation, etc.) and the mechanisms behind these influences.

Therefore, the purpose of this paper is to review the current state of research on the impact of AIGC on user behavior in digital marketing, and to fill the gaps in the existing research. This paper will focus on the core theme of "the impact of AIGC on user behavior in digital marketing", and discuss in depth how AIGC affects users' purchasing decisions, information searching behavior, and

interactive participation, etc. Meanwhile, this paper will also analyze the impact of AIGC on user behavior. At the same time, this paper will also analyze the mechanism behind these influences, such as personalized recommendation, emotional marketing and so on [1].

In the specific research process, this paper will adopt the method of literature review to extensively collect and analyze academic papers, case studies and industry reports in related fields at home and abroad. By combing and summarizing these literatures, this paper will distill the main viewpoints and conclusions of AIGC's influence on user behavior in digital marketing, and construct the corresponding theoretical framework.

The significance of this study is that it will provide valuable references and insights for related enterprises and researchers. By gaining a deeper understanding of the current situation and development trend of the application of AIGC in digital marketing, enterprises can formulate more accurate and effective digital marketing strategies to improve marketing effectiveness and user satisfaction. At the same time, this study will provide new research directions and ideas for the academic community and promote the in-depth development of related fields. For the future development, this paper predicts that AIGC will play an increasingly important role in digital marketing, but at the same time, it will face more challenges and problems. Therefore, this paper suggests that future research should pay more attention to the ethical, legal, and data security aspects of AIGC to ensure its healthy and sustainable development [2].

2.   Literature Review

In recent years, the application of Artificial Intelligence Generated Content (AIGC) technology in the field of digital marketing has attracted a lot of attention. AIGC technology provides a new type of authoring method for enterprises to generate and optimize marketing content through Artificial intelligence-generated content. This technology has achieved remarkable results in the fields of e-commerce, finance, insurance, industry, etc., and has pushed digital marketing to leapfrog to digital intelligence. However, the development of AIGC also faces technical, ethical, and legal challenges [3].

The application of AIGC technology is regarded as an emerging momentum in the development of digital marketing approaches. AIGC technology can autonomously and intelligently generate communication content according to marketing scenarios to enhance marketing efficiency. For example, AIGC can generate 3D models and textures of goods to provide a near-physical online shopping experience, or create virtual anchors to provide users with uninterrupted recommendations of goods and online services.

While AIGC technology shows great potential in digital marketing, it also poses some challenges. First, privacy and security risks are a major concern, as the effective operation of AIGC relies on the collection and processing of large amounts of data. Companies need to ensure the quality and security of data and comply with data laws and regulations and ethical principles. In addition, bias and discrimination risks are also issues that AIGC technology needs to face. Due to the imbalance of training data, large models and algorithms may have bias and discrimination amplification problems, which need to be mitigated by enterprises taking appropriate measures in data collection and algorithm design [4].

The exploration of the application of AIGC technology in the media field has also demonstrated its potential in journalism, advertising, and film and television.AIGC technology can enhance news discovery, realize human-computer symbiotic communication in advertising, and activate creative output in film and television. However, these applications are also accompanied by potential risks, such as knowledge bias, rumor proliferation, privacy security issues, and copyright infringement. In order to ensure the safe and reliable application of AIGC technology, effective coping strategies need

to be proposed from the perspectives of dissemination subject, dissemination content, and technology regulation.

In terms of agricultural e-commerce content marketing, the application of AIGC technology brings new opportunities for agricultural e-commerce, such as reducing costs, improving efficiency, and expanding the influence of content [5]. At the same time, AIGC technology also faces some challenges, including the difficulty of guaranteeing content stability, the risk of user privacy leakage, and copyright issues. In order to cope with these challenges, it is necessary for technology providers to improve the generation technology, platforms to strengthen the management mode, and the state to introduce corresponding legal norms.

It can be seen that the application of AIGC technology is promising. It can automatically generate various forms of content, including text, audio, images and video, etc., providing a constant stream of ideas and materials for digital marketing. This automated content generation not only enriches the marketing means, but also makes the marketing content more diversified and personalized. Through big data analysis and machine learning, AIGC technology can provide in-depth insight into user needs, realize personalized marketing strategies, and provide users with customized content and recommendations, thus effectively improving user satisfaction and loyalty. In addition, AIGC technology can also improve the production efficiency of marketing content, shorten the content production cycle, reduce costs, and make marketing more efficient and flexible [6]. At the same time, AIGC technology also has the ability of cross-modal conversion, which can convert different forms of content such as text and audio to each other, providing more diversified choices and richer expressions for brand communication. Finally, AIGC technology can also help brands automate the publication and distribution of content on multiple channels, realizing omni-channel linkage and enhancing brand exposure and user coverage.

However, AIGC technology also faces some challenges in digital marketing. First of all, privacy and security risk an issue that can't be ignored; AIGC technology may face the risk of data leakage, misuse and tampering when it collects and processes a large amount of user data. Therefore, strengthening data protection and management is the key to ensuring the safe application of AIGC technology. Second, AIGC technology may replicate and amplify biases in training data when generating content, leading to unfair or discriminatory phenomena. This requires that when using AIGC technology, this paper need to strictly audit and regulate the content it generates to avoid its negative impact. In addition, the content generated by AIGC technology may contain false or misleading information, which requires us to establish a content audit and supervision mechanism to ensure the authenticity and quality of the content. At the same time, AIGC technology may involve copyright infringement in the process of content creation, which also requires us to clarify copyright attribution and legal use to avoid legal disputes [6]. Finally, in digital marketing, the collaboration between AIGC technology and human beings may have inconsistencies in goal setting and task allocation, which requires us to optimize the human-computer collaboration mode to ensure that both parties can work together efficiently.

3. The Impact of AIGC on User Behavior in Digital Marketing

3.1. Influence Mechanism

The introduction of AIGC technology makes content personalization possible. Through deep learning and big data analysis, AIGC can accurately capture users' interests, consumption habits and psychological needs to generate highly personalized content. This customized content not only meets users' tastes, but also resonates with them, increasing their engagement and satisfaction. For example, on social media, AIGC can recommend customized advertisements and promotional content for users

based on their browsing history, likes and comments, making advertisements no longer intrusive but a source of information of interest to users [7].

AIGC technology greatly enhances the interaction between brands and users. With tools such as chatbots and virtual assistants, brands can provide instant response services to users, answer their questions and collect their feedback at any time. This real-time interaction not only improves user satisfaction, but also allows brands to better understand user needs and optimize their products and services. At the same time, AIGC is also able to provide users with a more natural and smooth communication experience through intelligent Q&A and voice interaction, further bridging the distance between brands and users [8].

AIGC technology plays an important role in data-driven decision support. It is able to process and analyze a large amount of user data to provide marketers with accurate user profiles and marketing strategy suggestions. Through in-depth understanding of user behaviour and preferences, AIGC helps marketers develop more precise marketing strategies and improve marketing effectiveness. For example, AIGC can analyze information such as users' browsing behaviors, purchase records and search terms on websites to predict users' needs and points of interest, so as to recommend products or services to users that they may be interested in. This data-based marketing strategy not only improves marketing efficiency but also reduces marketing costs.

In terms of content innovation, AIGC technology has demonstrated strong capabilities. It can automatically generate various forms of content, such as articles, videos, images, etc., providing brands with diverse marketing tools. These novel contents are not only highly creative and interesting, but also capable of delivering brand messages in a more vivid and intuitive way [8]. AIGC technology can also automatically create content related to users according to their preferences and behaviors, such as recommending articles based on their reading preferences and videos based on their viewing habits. This kind of personalized content recommendation not only improves user satisfaction, but also increases users' stickiness to the brand.

In addition, AIGC technology has the ability to generate cross-modal content. It can convert textual content into forms such as images, video or audio to provide users with a richer experience. This cross-modal content not only increases the attractiveness of the content but also improves its dissemination. For example, AIGC can convert an interesting article into video format, allowing users to experience the content through both visual and auditory stimulation. This diversified form of content not only meets the diverse needs of users but also improves user engagement and loyalty.

AIGC technology also has the ability to predict and adapt to user behavior [9]. It can predict the future behavior of users based on their historical behavior and preferences, thus providing more personalized services and content. This capability not only increases user satisfaction and loyalty, but also brings more business opportunities for brands. For example, AIGC can analyze a user's purchase history and online behavior to predict new products or services that the user may be interested in and recommend them to the user. This kind of recommendation system based on user behavior not only improves marketing effectiveness, but also brings users a more convenient shopping experience.

3.2. The Effect of the Role

AIGC technology is able to accurately capture users' personalized needs through deep learning and big data analysis, and generate highly customized marketing content accordingly. This personalized content is no longer a static template but can be dynamically adjusted according to users' real-time needs and interests. For example, on e-commerce platforms, AIGC can analyze a user's browsing history, and purchase history and search keywords to recommend products and offers that highly match their interests [10]. This kind of precision marketing not only improves user engagement and satisfaction but also enhances users' loyalty and stickiness to the brand by meeting their personalized needs. In addition, AIGC can generate ad copy and visual designs that match users' interests and

values based on their social media interaction data. This kind of content not only better attracts users' attention, but also resonates with them emotionally and promotes an emotional connection between users and brands. By gaining a deeper understanding of the user's inner world, AIGC provides brands with the opportunity to establish a deep connection with the user, thus realizing a new level of precision marketing.

AIGC technology has significant advantages in improving marketing efficiency and reducing costs, and the application of AIGC technology makes the content generation process efficient and convenient. Compared with traditional manual content generation, AIGC can generate a large amount of high-quality content in a short period of time to meet the needs of different marketing channels. This efficient content generation capability not only reduces labor costs, but also makes marketing activities more flexible and efficient. Brands can respond faster to market changes and adjust their marketing strategies to meet the diversified needs of users. AIGC is also able to automate the updating and optimization of content. Through real-time analysis of user feedback data, AIGC can continuously optimize marketing content to improve user experience and satisfaction. This user-centric optimization strategy can better meet user needs and increase user loyalty and satisfaction, thus creating greater business value for the brand.

Despite its significant advantages in digital marketing, AIGC faces the challenges of algorithmic bias and ethical issues. If the training data is biased or insufficient, AIGC-generated content may be biased or discriminatory in some way, which may have a negative impact on brand image and user behavior. In addition, AIGC may unconsciously reinforce certain stereotypes or discriminate against certain groups of people during the content generation process, which may also raise social and ethical issues. At the same time, AIGC-generated content may involve the risk of copyright infringement, especially when using copyrighted material. Brands need to ensure that the content used has legitimate copyright and intellectual property rights to avoid possible legal disputes and brand image damage. In addition, brands need to be concerned about the originality issues that may arise from AIGC technology in the content generation process to ensure that the content generated is uniquely creative and valuable.

4. Research Discussion

Among the commonalities of numerous studies, AIGC's superior ability to generate personalized content has been mentioned several times. This was highlighted by several pieces of literature, which pointed out that this personalized content generation has a significant effect on enhancing user experience and driving conversions. In addition, data-driven decision-making is one of the consensus of the research. Several literatures explicitly mention that AIGC is able to provide scientific support for the development of marketing strategies through the analysis of massive user data, thus improving the accuracy of marketing. Further, several research reports have noted the unique advantages of AIGC in cross-modal content generation, which can easily transform text into video or images, greatly enriching the presentation and attractiveness of content. Finally, user behavior prediction is also seen as an important commonality of AIGC, a predictive capability that helps companies gain a deeper understanding of customer needs and market trends [10].

Despite the many commonalities, the studies also present some notable differences when exploring AIGC. In particular, on the issue of privacy and ethics, some of these literatures specifically emphasize the privacy and ethical boundaries that AIGC may touch when processing user data, which contrasts with other studies that focus primarily on the application and effectiveness of the technology. In addition, the breadth of AIGC technology applications is one of the points of difference between the studies. Some studies focus on applications in specific industries such as healthcare and education, while others broadly explore the applicability of AIGC in multiple domains. At the same time, the

research methodologies adopted by different literatures are also distinctive, with experimental design, survey research and case study analysis all represented.

In the process of in-depth research, the author also found some problems and shortcomings. Some of the studies may rely too much on a particular type of data or research method, such as over-reliance on the results of questionnaire surveys or small-scale experiments, which may limit the generalizability and applicability of the findings to a certain extent. Meanwhile, in terms of data collection, with increasingly stringent privacy regulations, how to legally and compliantly collect and use user data for AIGC training and testing has become a major legal and ethical challenge for researchers. In addition, the transparency and interpretability of the technology has been pointed out by some studies as a glaring shortcoming of current AIGCs, which may affect users' trust in AIGC-generated content.

5. Conclusion

In the new era of digital marketing, the rise of AIGC technology has revolutionized the industry. Its application not only significantly influences user behavior by generating highly personalized and diversified content, but also greatly enhances user engagement and brand loyalty by accurately capturing users' interests and needs. AIGC technology, with its powerful data analytics, is able to predict user behaviors and provide strong support for enterprises to formulate their marketing strategies, thus ensuring the accuracy and effectiveness of their marketing campaigns. In addition, AIGC's ability in content innovation should not be underestimated, it can automatically generate articles, videos, images and other diversified forms of content, bringing users an unprecedented interactive experience. These advantages not only enhance user experience, but also bring higher conversion rate and market competitiveness for enterprises, making AIGC an indispensable part of digital marketing.

After in-depth research, it is not difficult to find that AIGC technology shows great potential and value in digital marketing. It can not only significantly improve the effect of content marketing and change the way of interaction between users and brands, but also bring considerable business value to enterprises. However, with the wide application of AIGC technology, this paper must also face up to the challenges it brings, such as user privacy protection, ethical standards and content transparency. Therefore, while utilizing AIGC technology to promote digital marketing, this paper must always pay attention to these issues to ensure that user rights and interests are fully protected.

Further to the future research direction, the author believes that interdisciplinary research will become an important trend. Combining the knowledge of psychology, sociology, data science and other fields will help us understand the multi-dimensional role of AIGC in digital marketing in a more comprehensive and in-depth way. Meanwhile, with the continuous improvement of privacy protection regulations, exploring new privacy protection technologies to ensure the security and privacy of user data will be an important direction for future research. In addition, improving the transparency and explanatory nature of AIGC to help users better understand its workings and decision-making process is likewise an indispensable research topic for the future. Finally, focusing on the long-term impact of AIGC in digital marketing, including the impact on user behavior, brand trust, and even social culture, as well as the development of multimodal and interactive AIGC, will provide rich topics and broad space for future research.

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