

The Influence, Selection, and Management Strategies of AI Empowered Platform KOLs: A Case Study of Xiaohongshu

Hengrui Gong ^{1*}, Yueming Ma ², Jiehong Peng ³

¹School of Management, Zhengzhou University, Zhengzhou, China

²Faculty of Arts, University of British Columbia, Vancouver, Canada

³College of Traditional Chinese Medicine, Guangzhou University of Chinese Medicine, Guangzhou, China

* Corresponding Author Email: 1809030126@stu.hrbust.edu.cn

Abstract. In the era of self-media, the influence of Key Opinion Leaders (KOLs) on social platforms is growing and becoming a key driver of marketing. Compared to the traditional media era, KOL marketing demonstrates greater interactivity and precision. This article takes the Xiaohongshu platform as an example. Firstly, the differences in the current situation and characteristics of KOL marketing between the traditional media era and the current era are introduced, followed by an exploration of how AI technology can empower the influence of platform KOLs. It also analyses the important role of different levels of KOLs in AI technology-enabled management strategies. Artificial Intelligence (AI) technology, utilizing refined content creation optimisation, personalised audience targeting, enhanced effective interaction mechanisms, real-time data monitoring and analysis, and improved operational management efficiency. It builds a more efficient and precise marketing ecosystem for KOL groups. By analysing, this article believes that AI technology has a significant impact on enhancing the influence and commercial value of KOLs.

Key words: KOL, AI technology, marketing.

1. Introduction

In today's digital age, social media has become an indispensable part of people's daily lives. With the development of social media, the role of Key Opinion Leaders (KOL) in brand marketing is becoming more and more important. KOLs refer to individuals or organizations with extensive influence and high credibility in a specific field. KOLs help brands spread information, increase brand awareness and drive sales efficiency through their personal influence and extensive fan base. Compared with traditional advertising, KOL marketing has higher credibility and interactivity and is therefore favored by more and more brands. KOLs can encourage consumers to make purchases through live streaming, especially in the clothing industry, where customers are more likely to buy products from brands promoted through social media [1]. KOLs use their traffic to expand market products and provide promoted products to more audiences. At the same time, they realize the value of their traffic and obtain more public domain traffic, such as conversion rate and post engagement, thus earning huge profits for brands [2].

However, with the increase in the number of KOLs on various platforms and the intensification of market competition, how to select suitable KOLs and manage them effectively has become a major challenge for brands. Traditional KOL selection and management methods mainly rely on experience and intuition, which is not only inefficient but also difficult to guarantee results. With the rapid development of technology, more and more brands are trying to use AI to optimize the selection and management process of KOLs to improve marketing effectiveness and return on investment. Using algorithms and big data models to rank KOLs can help companies improve the accuracy of KOL selection and develop more effective marketing strategies to drive product sales, thereby achieving sustainable benefits [3].

This article aims to explore the changes in the platform's selection and management of KOLs under the conditions of AI technology empowerment. Taking Xiaohongshu as an example, this paper analyzes the selection and management strategies of KOLs with different influences under the

empowerment of traditional technology and AI technology. Specifically, the objectives of this study include the following aspects.

First, this article will analyze the current status and characteristics of KOL marketing in the media era, understand the performance of KOLs on social media platforms and their impact on brand marketing, and sort out the development trends and status of KOL marketing. Second, this article will compare the differences between traditional platforms and AI-enabled platforms in KOL selection and management, analyze the differences between traditional methods and AI-enabled methods in KOL selection, operation, and effect evaluation, and explore their respective advantages and disadvantages. Through comparison, this article will put forward more scientific suggestions for the selection and management of KOLs, to provide reference for research and practice in related fields.

In summary, this article not only hopes to reveal how AI technology can empower KOL marketing through theoretical analysis but also hopes to provide a scientific basis for brands to select and manage KOLs by proposing practical management strategies. It is believed that with the continuous development of AI technology, its application in KOL marketing will become more extensive and in-depth, thereby further promoting the innovation and development of brand marketing.

2. The Current Situation and Characteristics of Kol Marketing in the Media Era

2.1. KOL Marketing

For KOL marketing, KOL will focus on a specific area. For instance, KOL for the beauty industry will focus on the review and promotion of cosmetics and skincare products, and KOL for the technology industry will review electronic products. This can more accurately match the target audience and accordingly improve the quality of the content to enhance user trust. In addition to the classification of genres, KOLs will focus on the diversity of the content that they produce. KOLs will publish articles, photo content, long-video and short-video, etc. Their topics will also include product reviews, product recommendations, and interactive content. KOLs will publish articles, photo content, long and short videos, etc. Their topics will also include product reviews, product recommendations, interactive content, etc. In the study of KOL marketing strategy enhancement in the new media era, it is pointed out that such diversified media marketing of KOL is conducive to the enrichment of marketing channels [4]. KOL also has a great breadth of influence. In recent years, KOL cross-platform layout has become a major trend, as KOLs operate their accounts on multiple platforms at the same time, which leads to an increase in the breadth of KOL's influence. At the same time, the different activities that KOLs participate in when cooperating with brands will also increase the breadth of KOLs' influence. Currently, KOLs realize cash in various ways. First of all, advertising revenue is one of the main ways for KOLs to realize cash, KOLs cooperate with brands and insert brand advertisements into the content they publish and get revenue. Secondly, live streaming is also one of the ways for KOLs to realize cash. For KOLs with high visibility, KOLs will charge merchants a certain amount of appearance fees and also receive a certain percentage of commission based on the sales of goods. Thirdly, KOLs are also invited by brands to participate in offline activities and thus earn income.

2.2. Characteristics of KOLs

KOLs play a pivotal role at the marketing level, and a superior KOL needs to possess many characteristics. Cao in his study on the factors influencing KOLs on consumers' purchase intention, pointed out that KOLs need to possess four characteristics: professionalism, popularity, interactivity, and charisma [5]. Professionalism means that KOLs need to have a deep understanding of the products they promote. Jiaxin Feng also pointed out in his article that KOL's professionalism has a direct impact on consumers' shopping experience as well as their willingness to consume [6]. Visibility refers to how well an individual is known among users on the platform. Interactivity refers

to KOL's real-time interaction with users during live streaming, replying to other users' comments, organizing activities, etc. Zhao pointed out that KOL's interactivity is positively related to the purchaser's willingness to consume. KOL's charisma represents KOL's sense of humor, affinity, etc. when promoting the content [7].

2.3. Challenges with KOLs

There are also some challenges in KOL marketing, such as KOL's morality and integrity. First of all, KOL's inappropriate comments can hurt the product's brand. Secondly, some KOLs violate integrity by purchasing fans, plays, likes, and comments through channels, making it difficult for brands and consumers to distinguish better and more appropriate KOLs.

3. Selection of KOLs - Comparative Analysis of Traditional Technology and AI Technology

3.1. Traditional Methods

3.1.1. KOL Selection

On traditional platforms, the selection of KOLs mainly depends on the brand's experience and manual analysis. Brands usually select KOLs with different influences in the following ways.

First, brands will make choices based on the number of fans. Brands usually choose KOLs with many fans, hoping to increase brand exposure through their wide influence. However, the number of fans cannot fully reflect the real influence of KOLs, because there may be fake fans or zombie fans among them.

Second, brands make choices based on content quality. Brands will observe the KOL's historical content and evaluate whether the quality and style of their content are consistent with the brand image. High-quality content can attract more attention and interaction, thereby improving the brand communication effect.

Third, brands choose KOLs based on their compatibility with themselves. Brands will choose KOLs that are highly relevant to their products or services to ensure that KOL's fan base is consistent with the brand's target audience. For example, cosmetics brands usually choose beauty KOLs, while sports brands tend to choose fitness KOLs.

Fourth, brands make choices based on industry reputation. Brands also refer to the KOL's reputation and cooperation record in the industry. KOLs with a good cooperation record and credibility are usually more favored by brands.

Although these methods are simple and direct, they are inefficient and have a high degree of subjectivity and uncertainty. Brands often need to spend a lot of time and energy to screen and evaluate KOLs, and it is difficult to predict the results of marketing.

3.1.2. KOL Operation

On traditional platforms, KOL operations mainly rely on manual management and direct communication. Brands usually adopt the following operation strategies.

First, brands need to establish long-term cooperative relationships with KOLs and keep in touch through emails, phone calls, offline events, etc. Although this method helps to enhance the relationship between brands and KOLs, it requires a lot of time and human resources. Secondly, brands will provide KOLs with necessary support and resources, such as free products, exclusive discounts, exclusive content, etc., to motivate KOLs to promote the brand. Brands also communicate with KOLs regularly, provide marketing advice and feedback, and help KOLs improve content quality and influence. Finally, brands need to manually monitor KOLs' published content and interactions to ensure that they are consistent with the brand image and adjust operational strategies promptly. This process is cumbersome and time-consuming, and brands often find it difficult to discover and solve problems on time.

3.2. AI Technology Empowerment Methods

3.2.1. KOL Selection

The introduction of AI technology has greatly improved the efficiency and accuracy of KOL selection, allowing brands to select KOLs more efficiently in many aspects. First, AI can quickly process and analyze large amounts of social media data to evaluate KOLs' influence, fan profiles, content quality, etc. Second, AI can use data for precise matching. AI can automatically recommend the most suitable KOLs based on the brand's specific needs and market positioning. Through machine learning (ML) algorithms, AI can identify and predict the fit between KOLs and brands, improving the accuracy and effectiveness of selection. AI can recommend KOLs that can truly influence the target audience by analyzing the interests, hobbies and behavioral habits of KOL fans. Moreover, AI can monitor KOLs' performance and market changes in real-time and adjust the recommendation results promptly to ensure that brands always choose the most suitable KOLs. This dynamic adjustment capability can help brands respond to market changes and competitive environments more flexibly.

3.2.2. KOL Operation

The application of AI technology in KOL operations is mainly reflected in the following aspects.

First, AI can help brands manage cooperation with KOLs more efficiently through automated tools and intelligent platforms. AI can automatically track and analyze KOLs' published content, monitor their interactions in real-time, and provide personalized operational suggestions. In this way, brands do not need to spend a lot of time and human resources on manual management. Secondly, AI can provide scientific operational decision support through data analysis. AI can analyze KOLs' historical performance, predict their future influence and interactions, and help brands formulate more accurate operational strategies. AI can also evaluate the popularity and user feedback of KOL content and optimize brand communication effects through sentiment analysis and emotion recognition. Finally, AI can evaluate the effectiveness of KOL marketing in real-time, identify potential problems and opportunities, and adjust operational strategies promptly. AI can evaluate the communication effect and conversion rate of KOL content by analyzing user comments and interaction data, helping brands better understand the needs and preferences of target audiences and improve return on investment.

In March 2021, Bobbi Brown and Xiaohongshu Inspiration Marketing jointly conducted a significant experiment in developing explosive products. Using AI technology, the brand found a differentiated market by analyzing the search trends of foundation products. At the same time, it found inspiration from many UGC content analyses, redefined the nickname "Orange Cream Before Makeup", and then used the brand to test the waters, allowing Xiaohongshu's beauty experts to become seed users. After the initial preparation, the brand found professional makeup artists and beauty bloggers, established a professional image of bloggers and makeup artists holding a bottle, and tried to sell it in a well-known anchor's live broadcast room. The market feedback was obvious, and all 5,500 products were sold out. Bobbi Brown randomly adjusted its marketing strategy and began to place many advertisements and topics on Xiaohongshu. It achieved a 40-fold increase in brand searches, a 40-fold increase in brand notes, a 1,000% surge in e-commerce platform searches, and a 900% surge in e-commerce platform sales.

3.3. Discussion

Through comparative analysis of traditional methods and AI-enabled methods, this article believes that AI technology has significant advantages in improving the efficiency of KOL selection and management and improving marketing effectiveness. Traditional methods rely on experience and manual operations. Although they have a certain flexibility, they are inefficient and easily affected by subjective factors. In contrast, AI technology can quickly process and analyze large amounts of data, provide scientific and objective decision-making support, and significantly improve the effectiveness and return on investment of KOL marketing.

However, the application of AI technology in KOL management also faces some challenges, such as data privacy protection, algorithm fairness, and transparency. These issues need to be continuously explored and resolved in practical applications to ensure that AI technology can better serve brand marketing and KOL management.

4. AI Technology Empowers the Identification and Management of Kols With Different Influences on the Platform

4.1. KOL Influence Classification

Taking Xiaohongshu as an example, the influence of KOLs can be divided into multiple dimensions, such as the number of fans, the interaction rate between likes, favorites and comments, and the quality of content. Based on these dimensions, this article categorizes KOLs into three types: head KOL, waist KOL, and tail KOL [8]. This paper analyses each according to their characteristics and shortcomings.

(1) Head KOLs are characterized by a fan base ranging from 500,000 to 1,000,000. Large fan base with high influence and appeal. The output content is professional and diverse with high professional literacy and creative ability. High commercial value, due to high traffic from head KOLs, they are highly favored by brand collaborations, thereby helping the brand increase its visibility and sales.

The scarcity of top-tier KOLs constrains engagement with fans. Due to the large number of fans, it is difficult for head KOLs to interact effectively with each fan. The loyalty of fans is relatively weak, which affects their stickiness. Operations management is complex, such as chain communication, price negotiation, progress tracking, etc, which slows down work efficiency, and is easy to human errors and communication costs during the process, and influential head KOLs focus on content creation and development marketing strategies. Content homogenization risk, top KOLs may tend to create the same hot topics in order to maintain high exposure. This will lead to easy homogenization within and reduce the attention of fans.

(2) The characteristics of waist KOLs are that their fan base ranges from 50,000 to 500,000. Waist KOLs in the waistcare industry cover a wide range of fields, have a high interaction rate with fans, have strong user stickiness, and convey information more accurately. The cost of brand cooperation is relatively low, and the cost-effectiveness is high [8]. More flexible in terms of creative content and collaboration methods, customized services can be provided according to the needs of the brand, making the waist KOL competitive in terms of flexibility.

The lack of waist KOLs has limited influence compared to head KOLs. The overall influence is weak, which may reduce the exposure of cooperative brands. The content creation ability of some waist KOLs is unstable. Lack of innovation and uniqueness leads to insufficient content quality. Fan stickiness is unstable and easily affected by content quality or other factors, resulting in fluctuations.

(3) The characteristics of tail KOLs are that their fan base ranges from 5,000 to 50,000. It has high potential. Although with a small number of fans, however, because of the personal style and creative flexibility, he has great potential for development. The cooperation between tail KOLs and brand owners has low costs and high cooperation, which can achieve low-cost and wide coverage marketing effects and establish long-term cooperation [8]. The shared content is more authentic and close to life, easy to resonate and attract users' attention.

The disadvantage of waist KOLs is that their influence is limited, and compared to top KOLs, their overall influence is weaker, which may reduce the exposure of cooperative brands. The content quality is unstable. Some tail KOLs lack professional competence and creative enthusiasm. The quality of the produced content is relatively low.

4.2. AI Technology Empowers KOL Management Strategies with Different Impacts

4.2.1. Head KOL Management Strategy

AI personalized content recommendation and AI technology can analyze the behavioral characteristics and preferences of fans on the platform, identified fans' emotional tendencies and understand their needs. To provide personalized interactive recommendations for head KOLs, it improves interaction quality and enhances fan stickiness and loyalty. AI technology can achieve more intelligent operational management in the future, such as supply chain price optimization, price adjustment, marketing activity planning, etc, significantly improving operational efficiency [9]. AI technology optimizes content creation, utilizing AI technology to monitor hot topics and keywords in real-time, identifying the most popular content, and adapting styles to enhance content quality and appeal, further enhancing the exposure of cooperative brands and fan stickiness.

4.2.2. Waist KOL Management Strategy

AI technology analyzes hot topics and unique features in the field of waist KOLs through analysis, guides its content positioning, promotes differentiated development, and enhances influence. Content innovation by utilizing AI intelligent recommendation function, waist KOLs can identify new content forms and new ideas, improve content innovation and attractiveness, and attract more fans' attention. Intelligent fan portrait, the detailed fan profile constructed through AI technology includes geography, age, interests, etc[10], provides precise fan expansion strategies for waist KOLs, utilizes AI technology for sentiment analysis and interactive recommendations to improve interaction quality and enhance fan stickiness.

4.2.3. Tail KOL Management Strategy

AI content can provide guidance and suggestions for content creation for tail KOLs, help them improve content quality, increase attention, promote content dissemination to enhance influence. With strategy optimization and adjustment, AI can improve content quality based on audience feedback on content direction, optimize release time, improve promotion methods, etc to help tail KOLs enhance their influence and commercial value.

4.3. Evaluation and Optimization of Digital-driven Effects

With the data-driven decision-making, AI technology can collect and analyze various data of KOL marketing activities in real-time, such as exposure, click-through rate, conversion rate, etc., to provide comprehensive effectiveness evaluation reports for KOLs. It helps KOLs to timely understand marketing effectiveness, identify potential issues and areas for improvement adjust marketing strategy [4]. Based on the results of data analysis, AI can continuously assist in optimizing KOLs' advertising strategies, content direction, brand collaborations, and more, to improve marketing effectiveness. AI technology will continue to play an important and irreplaceable role in the management strategies of KOLs at all levels of the platform.

5. Conclusion

Key Opinion Leaders (KOLs) play an important role in platform marketing. KOLs focus on their area of expertise, have a high diversity of content, and have a high breadth of influence and high realization power. Professionalism, interactivity, influence, and charisma are all required characteristics of KOLs.

With the emergence of AI in the past few years, AI has brought changes to the selection and operation of different influential KOLs. In the traditional model, KOLs are selected based on the number of followers, the quality of the content, the fit with the brand, and the reputation of the KOL. With the empowerment of AI, the selection of KOLs has greatly improved the efficiency and accuracy of KOL use through data analysis, precise matching and according to the performance of KOLs and

market changes. At the operations level, AI improves the effectiveness of marketing by analyzing the market and KOLs through fast data processing and timely response to KOLs and the market.

In addition to positively impacting brands' selection of KOLs and their operations, AI has also updated management strategies for KOLs with different levels of influence. For instance, it detects trending topics for head KOLs with more than 500,000 followers to help improve the quality of their content, and it also improves the quality of interaction and fan stickiness for waist KOLs between 50,000 and 500,000 followers, as well as increasing the influence and commercial value of tail KOLs with 5,000 to 50,000 followers.

However, the ethical and integrity issues of KOLs that brands encounter when choosing KOLs, as well as the issues of data privacy protection, algorithmic fairness, and transparency in AI-enabled KOLs still need to be discussed and summarized. Future research should focus on these aspects to ensure better integration of KOLs with AI technology to bring higher benefits to brands and individuals.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

References

- [1] Zou Y, Peng F. Key opinion leaders' influences in the Chinese fashion market [C]//International Conference on Fashion communication: between tradition and future digital developments. Cham: Springer International Publishing, 2019, 118-132.
- [2] Suratepin M S, Funk S. The increasing influence of key opinion leaders (KOLs) on millennial purchases of beauty products-based on social media platforms. Thammasat University. Faculty of Journalism and Mass Communication, 2022.
- [3] Lam H Y, Tang V, Wu C H, et al. A multi-criteria intelligence aid approach to selecting strategic key opinion leaders in digital business management. *Journal of Innovation & Knowledge*, 2024, 9 (3): 100502.
- [4] Li Yuwen. Research on Enhancing KOL Marketing Strategies in the New Media Era. *Technology and Market*, 2023, 30 (10): 183-186.
- [5] Cao Ning. Research on the Factors Influencing Consumer Purchase Intention by Key Opinion Leaders. Jiangxi Normal University, 2023.
- [6] Feng Jiaxin. Research on the Influence of Key Opinion Leaders' Characteristics on Consumer Purchase Intention in E-commerce Anchors. Harbin University of Commerce, 2022.
- [7] Zhao Dawei, Feng Jiaxin. Research on the Impact of Key Opinion Leaders' Characteristics on Consumer Purchase in E-commerce Anchors. *Business Research*, 2021 (04): 1-9.
- [8] Dou Rongyan The Inspiration and Application Strategies of Self media KOL Marketing on Publishing Marketing: Taking the Encyclopedia Britannica (Chinese Annotated Edition) as an Example. *Publication and Distribution Research*, 2020, (5): 46-51.
- [9] Zeng Xianggan. New model of social cross-border e-commerce: AI empowerment and dissemination of intangible cultural heritage. *Business Exhibition Economy*, 2024, (07): 68-71.
- [10] Zhou Yao. Research on Marketing Positioning of Key Opinion Leaders (KOLs) in the Era of Self Media: A Case Study of Xiaohongshu. *Journal of Chuzhou University*, 2022, 24 (01): 33-36.