



# The Research on the Impact of Digital Marketing on the High-Quality Development of the Cultural Industry

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**Abstract.** With the rapid development of digitalization and informatization, digital marketing is profoundly influencing the models and new trends of high-quality development in the cultural industry. Digital marketing not only expands the range of cultural products and services but also promotes the transformation, upgrading, and innovative development of the cultural industry, bringing new opportunities and challenges. In recent years, the current situation, existing problems, and future optimization directions of digital marketing's impact on the high-quality development of the cultural industry have become the focus of attention in both academic and practical fields. With the widespread application of tools such as social media, big data analysis, mobile internet, and artificial intelligence in the promotion and management of the cultural industry, digital interaction and innovative integration continue to develop, driving the transformation of traditional marketing models into data-driven approaches. However, while digital marketing has achieved certain results in enhancing brand influence and user engagement, it also faces numerous challenges and shortcomings. This paper analyzes the impact of digital marketing on the high-quality development of the cultural industry from various aspects, including the integration of digital technology and the cultural industry, digital marketing strategies, and policy guidance for the development of the digital cultural industry, providing reference paths for the integrated development of digital marketing and the cultural industry as well as the high-quality development of the cultural industry from multiple perspectives.

**Keywords:** Digital Marketing; Cultural Industry; Technology Application; Strategy Adjustment.

## 1 Introduction

In recent years, digital marketing has played an increasingly important role in the cultural industry, and its current development status, existing problems, and future optimization directions have become the focus of attention in both academic and practical fields. With the continuous advancement of digital technology, digital interaction and innovative integration are constantly developing. The application of digital interactive technology in the cultural industry has made cultural products or services

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more diversified and personalized. At the same time, it has improved the internal operational efficiency and decision-making efficiency of the cultural industry. With the arrival of Industry 4.0, the digitalization of the cultural industry has undoubtedly become a new driving force for its development.

With the popularization of internet technology and the widespread use of mobile devices, consumer behavior patterns have undergone fundamental changes. The rise of social media has transformed users from mere consumers of cultural products into content producers and disseminators. Therefore, enterprises and creators in the cultural industry must reassess and adjust their marketing strategies to adapt to this entirely new environment. The precise matching of digital marketing enables the cultural industry to effectively focus on target audiences, leveraging big data technology, enterprises can deeply analyze consumers' preferences, consumption habits, and behavioral characteristics, thereby formulating more precise marketing strategies. However, digital marketing in the cultural industry also faces numerous challenges and shortcomings. This paper aims to systematically analyze the impact of digital marketing on the cultural industry, providing referenceable pathways for the high-quality development of the cultural industry.

## **2 Research on the Integration of Digital Technology and Cultural Industries**

### **2.1 Current Status of Digital Interactive Technology Application in the Cultural Industry**

Currently, the application of digital interactive technology in the cultural industry is increasing, and specifically within the cultural industry, digital interactive technology has become a key force in promoting the innovation of cultural products and services, making the integration of digital interactive technology and the cultural industry particularly important. This article analyzes the integration of digital interactive technology and the cultural industry in the context of the digital economy. Hu Qiyuan et al. (2023)[1] point out that digital interactive technology significantly enhances consumer experience by providing various forms such as virtual reality (VR), augmented reality (AR), and interactive exhibitions, thereby attracting more participation and promoting the dissemination and sharing of cultural content. For example, through AR technology, museums can provide visitors with an immersive historical experience, making cultural heritage more vivid and interesting.

In addition, it should also be noted that the role of digital interactive technology in promoting the diversification and personalization of cultural products is also quite significant. The research by Huang Bin and Niu Jiaru (2023)[2] indicates that cultural products can adjust their content in real-time based on user data and interactive feedback, meeting the personalized cultural consumption needs. The application of data analysis and user profiling enables cultural enterprises to better understand target markets and consumer preferences, thereby optimizing product design and promotional strategies.

Additionally, it is important not to overlook the significant role of digital interactive technology in improving the internal operational efficiency of the cultural industry, promoting innovation in existing cultural products, and accelerating the formation of new cultural formats. For example, Gao Mengtong (2023)[3] proposed that the application of digital technology, particularly blockchain and artificial intelligence, provides new operational models for the cultural industry, such as the popularity of digital collectibles (NFTs), which has significantly changed the way artworks are collected and traded, offering creators more direct benefits. Moreover, multimedia technology is applied in the field of education and training, providing services for college students through a multimedia-assisted remote English teaching system [4]. In the cultural industry, the widespread application of multimedia technology also includes advertising and health promotion [5].

Guan Hao (2023) [6] emphasizes that digital technology plays a 'catalyst' role in promoting the digital development of culture. The integrated application of digital technologies, such as enhancing the precision of marketing strategies through big data analysis, providing flexible resources for the rapid dissemination of cultural content via cloud computing technology, and fostering innovative interactions on social networking platforms, is continuously optimizing and upgrading the overall ecology of the cultural industry.

Finally, the integration of digital technology and the cultural industry has profoundly influenced individual and collective identity recognition and collective memory [7]. The digital development of cultural symbols such as artworks and historical artifacts not only broadens the scope of dissemination but also provides new methods for preservation and recreation, holding significant value for cultural heritage and innovation.

Overall, the application of digital interaction technology plays a crucial role in the cultural industry, not only positively impacting the enhancement of user experience, meeting personalized needs, and forming new industrial models, but also providing strong support for the sustainable high-quality development of the cultural industry. With the continuous advancement of technology, the future integration of digital interaction technology and the cultural industry will present a more colorful development prospect.

## 2.2 Digital Transformation and Integration in Cultural Industries

In the context of today's digital economy, with the rapid development of digital technology, the cultural industry faces unprecedented challenges and opportunities for digital transformation. Based on this, we can summarize some strategies for the digital transformation of the cultural industry.

The first aspect is to introduce digital interaction technology as a key factor in promoting innovation in the cultural creative industry. Hu Qiyuan (2023)[1] points out that digital interaction technology can deepen user experience, enhance the participation and interactivity of cultural products, and thus stimulate the development of cultural creativity. In addition, digital interaction technology can also optimize the oper-

ational efficiency of the cultural creative industry and expand the dissemination range of cultural content.

Secondly, under the background of digital marketing, the phenomenon of 'breaking the circle' in the cultural and creative media industry is becoming increasingly prominent. Huang Bin and Niu Jiaru (2023)[2] believe that through digital means such as social media, search engines, and online advertising, cultural and creative products can transcend their original audience groups and reach more potential consumers. This requires cultural and creative enterprises to consider how to effectively utilize digital marketing tools to expand market boundaries when implementing digital transformation strategies.

Furthermore, Gao Mengtong (2023)[3] pointed out in his research that under the background of the digital economy, the cultural and creative media industry must rely on digital technology to achieve high-quality development, particularly by using data analysis and intelligent tools to gain insights into market demand, optimize the product supply chain, and enhance user experience. To some extent, the application of digital tools and platforms has become an indispensable part of the innovative development of the cultural industry. Emphasizing the important role of data analysis improves the quality of industry decision-making and operational efficiency.

In addition, Guan Hao (2023)[6] compares digital technology to an 'activator' for the development of cultural digitalization. Digital technology greatly promotes the dissemination and diffusion of cultural creativity by enhancing the accessibility and processing speed of information, becoming a key driving force for innovation and integration in the cultural industry chain.

In fact, the promoting effect of digital technology on corporate performance has been widely recognized. As pointed out by Hung-Tai Tsou et al. (2023)[8] in their study, the use of digital technology is beneficial for corporate performance, while digital transformation strategies and organizational innovation play important mediating roles in this process. Therefore, the cultural and creative media industry should actively embrace digital technology, consolidating its market position through strategic integration and innovation.

At the same time, media companies can also refer to Heersmink's (2023)[7] research on material identity, combining cultural identity, collective memory, and digital artworks to convey richer cultural connotations through digital media.

In summary, digital technology has become the core driving force behind the development of the digital cultural industry.

### **3 The Development of Digital Cultural Industry**

With the advent of the Industry 4.0 era, technologies such as cyber-physical systems (CPS), integration of computation, communication, and control, and big data analysis have emerged. Digital marketing methods will exist in a form that heavily relies on the Internet of Things paradigm and its related technologies [9]. Moreover, from the perspective of Industry 4.0, interconnected CPS technology is expected to achieve a leap from a linear 'value chain' to an automated and highly dynamic 'value network', en-

compassing production systems, infrastructure, and customers, ideally completing the automation of the entire production process. This not only enhances the efficiency of the dissemination of digital cultural content but also increases the breadth of its dissemination [10].

Moreover, we can see that under the continuous push of market opportunities, technological evolution is rapidly driving the development of safe robots that interact directly with humans, improved sensing and path planning technologies, as well as non-traditional applications such as autonomous vehicles and semi-autonomous drones [11]. In the context of Industry 4.0 in the digital age, it aims to provide enterprises and individuals with a seamless, fast, and efficient collaborative working environment, achieving cooperation among the entire industrial ecosystem. In networked enterprises, collaboration and cooperation among users are crucial [12], and when dealing with CPS, the interaction and collaboration between humans and machines are equally important [13].

The technological potential inherent in Industry 4.0 will continue to evolve in response to market demand and social development, with its application range expanding from traditional industrial environments to a broader array of service sectors. In fact, the Industry 4.0 model itself, due to its integrative characteristics and end-to-end principles, is virtually unrestricted by specific economic sectors, demonstrating broad applicability across industries. This characteristic provides new opportunities and challenges for the digital transformation and sustainable development of various industries [9].

Currently, the development status of the digital cultural industry is remarkable. With the continuous advancement of digital technology and the widespread application of innovative practices, the cultural industry driven by digital technology is showing strong development momentum and potential. The research by Huang Bin and Niu Jiaru (2023) [2] suggests that the digital cultural industry expands its breadth and depth of development through cross-border integration and innovation, 'breaking the circle'. They mention that during the digitalization process, both the output value and market scale of the cultural industry have achieved significant growth. For example, the greater diversity in the dissemination and consumption of cultural content through digital channels is fundamentally changing the ways in which content is created and distributed.

On the path of digital cultural finance, Yuan Shuai (2023) [14] pointed out that finance plays an extremely important role in the development of the digital cultural industry, with financial innovation providing new funding support channels and operational models, thereby accelerating the expansion and growth of the digital cultural industry. Digitalization not only improves financing efficiency but also enhances the stability of the supply chain for cultural products and services.

In addition, Kezai, Petra Kinga and Rechnitzer, Janos (2023) [15] found through research that cultural creative industry enterprises in major cities of Hungary exhibited significant performance improvements from 2008 to 2018. It can be seen that digitalization has become a key driving force for the development of the cultural industry, positively impacting everything from increasing output value and expanding markets to enhancing the overall performance of the creative industry.

## **4 Digital Marketing Strategies and Its Impact**

### **4.1 Digital Marketing in Data Protection Law and Metaverse**

Digital marketing plays a crucial role in the development of the cultural industry, particularly in the areas of data protection and the metaverse. As awareness of user data security increases and data protection regulations gradually improve, digital marketing must be conducted under the premise of legal compliance. As Bai Yang (2023) [16] stated, one of the challenges faced by digital marketing is how to fully utilize user data to enhance marketing efficiency while meeting legal and regulatory requirements. In response to this challenge, encryption and anonymization have been introduced in digital marketing strategies to protect personal information, while data analysis is used to refine user behavior patterns, making marketing activities more precise.

In the virtual reality metaverse constructed by digital technology, digital marketing opens up new boundaries. The concept of the metaverse provides an infinite marketing space that spans the real and the virtual, bringing new opportunities for digital marketing in the cultural industry. For example, Pham Thi Phuong Dung and co-authors (2023) [17] point out that in the metaverse, brands can create unique interactive experiences or exclusive content to attract and retain user engagement, such as drawing audiences through online virtual exhibitions or interactive games. Through this new form of interaction, companies establish connections with customers, which not only enhances user experience but also, to a certain extent, strengthens brand loyalty.

In this process, social media plays a crucial role as a core platform in the capabilities at the forefront of company innovation [18]. Social media is not only an effective tool for communication and user engagement but also an indispensable component of enterprises' innovative activities such as market research, product development, and creative generation. By conducting in-depth analysis of social media data, companies can more accurately grasp market trends, thereby forming marketing strategies that have a competitive advantage.

Overall, in the two key areas of Data Protection Law and the Metaverse, digital marketing needs to combine the latest technologies and regulatory changes to develop new strategies to better promote the development of the cultural industry.

### **4.2 The Challenges and Necessity of Data-Driven Marketing Transformation**

In the process of transforming to digital marketing, enterprises face multiple challenges, while recognizing the necessity of this transformation is key to their success. Firstly, the challenges of digital marketing are reflected in the collection, integration, and analysis of data. As Bai Yang (2023)[16] stated, the diversification of data sources and the rapid development of big data technology have placed higher demands on enterprises' data processing capabilities. Moreover, Xiu Jie (2023)[19] pointed out that differentiated marketing strategies are particularly important in the context of digitalization, as companies need to rely on digital means to identify segmented markets and customize personalized marketing plans.

The demand for digital marketing transformation is equally self-evident. Social media provides critical user feedback and market trend information in the early stages of innovation, which is essential for product development [18]. Digital marketing can not only enhance a company's brand awareness but also reduce marketing costs and improve ROI (Return on Investment) through precise market positioning. For example, the study by Pham Thi Phuong Dung et al. (2023) [17] applies the Theory of Planned Behavior (TPB) and the Technology Acceptance Model (TAM) to understand the intention of startups to adopt digital marketing, revealing the importance of learning digital marketing skills within enterprises.

Whether these challenges can be overcome depends on the ability to establish effective digital marketing strategies. This includes a profound understanding of social media marketing, as the systematic quantitative empirical research by Wirtz and Balzer (2023) [20] indicates that companies need to comprehend the dynamics and effectiveness of social media marketing. With the continuous improvement of transparency and precision in social media advertising, it has become a key driving force for enterprises to undergo digital marketing transformation.

In summary, the challenge of digital marketing transformation lies in how to efficiently process and utilize big data, how to accurately identify market demand and apply it to marketing strategies. Its necessity lies in the fact that digital marketing can improve market response speed, enhance brand influence, and ultimately achieve cost-effectiveness optimization. As related literature suggests, whether for existing enterprises or startups, the formulation of digital marketing strategies is an indispensable part of the contemporary cultural industry environment.

### **4.3 The Impact of Digital Marketing on Business Performance**

The use of digital technology has become an important factor in improving corporate performance. In the context of digital marketing, enterprises can enhance interaction with consumers through various digital platforms and tools, expand brand influence, and thereby improve corporate performance. Hung-Tai Tsou and Ja-Shen Chen (2023) [8] found through research that the use of digital technology has a positive impact on corporate performance, and that digital transformation strategies and organizational innovation can play a mediating role, helping companies benefit from the use of digital technology.

On one hand, by using digital technology, companies can more effectively collect and analyze consumer data, thereby formulating more accurate marketing strategies. Bai Yang (2023) [16] emphasized the importance of data marketing, pointing out that for companies to gain an advantage in fierce market competition, they must overcome the obstacles to implementing data marketing, which is a long-term task that cannot be ignored.

On the other hand, social media, as a part of digital technology, has become an important platform for enterprises to conduct marketing and interact with users. Naheed Bashir and Khaleel Malik (2023) [18] studied how social media helps enterprises build capabilities at the fuzzy front end of innovation, further confirming the positive correlation between social media use and corporate performance.

Moreover, through social media marketing, enterprises can not only be limited to traditional forms of advertising but can also attract and retain user attention through content marketing, interactive marketing, and other methods. Wirtz, Bernd W and Balzer, Isabell (2023) [20] also support this view in their systematic review of quantitative empirical research on social media marketing.

## **5 New Trends in Digital Marketing**

### **5.1 The Role of Social Media in Innovative Marketing Strategies**

In digital marketing strategies, social media has become a key channel for driving corporate innovation. According to the research by Naheed Bashir and Khaleel Malik (2023) [18], social media provides companies with a platform to leverage external knowledge resources and user feedback at the forefront of innovation—the fuzzy front end—to quickly respond to market changes.

Hung-Tai Tsou and Ja-Shen Chen (2023) [8] further point out that the use of digital technology has a positive impact on corporate performance, with social media serving as an important application of digital technology, playing its role by improving the company's digital transformation strategy and organizational innovation.

For cultural industry enterprises, implementing a social media strategy can be seen as a means of differentiated marketing [19]. Through social platforms, companies can customize their cultural products and enhance brand image and value through storytelling, interactive experiences, and other forms.

### **5.2 The New Trends in Digital Marketing: The Dual Impact of Law and Technology**

In the new trends of digital marketing, advancements in law and technology are jointly shaping the marketing strategies of enterprises. Specifically, from a legal perspective, privacy protection and data security are becoming increasingly important, and companies are subject to stricter regulations regarding access to and use of consumer data. For example, Bai Yang (2023) [16] analyzed the current status and challenges of digital marketing, pointing out that companies must comply with data protection regulations when using consumer information for market analysis and user profiling to avoid legal risks. At the same time, technological innovation enables companies to engage and communicate more effectively with target groups through social media, search engine optimization, and other digital channels. For instance, Bashir and Malik (2023) [18] noted that social media is not only a platform for information dissemination but also an important tool for companies' innovation 'fuzzy front end.' Through social media data analysis, companies can identify market trends and consumer demands earlier.

It is equally important to consider that the impact of technology is also reflected in the use of advanced digital tools and analytics to optimize marketing effectiveness. For example, Hung-Tai Tsou and Ja-Shen Chen (2023) [8] mentioned that enterprises achieve performance improvement through digital transformation strategies and organizational innovation as intermediaries in the use of digital technology.



Overall, the dual impact of law and technology has driven digital marketing towards greater responsibility and higher efficiency. Enterprises need to leverage the power of technology to enhance the complexity and innovation of marketing strategies while ensuring compliance. For instance, Xiu Jie (2023) [19] emphasized the importance of using digital marketing tools in the context of the digital economy when analyzing the differentiated marketing strategies of traditional manufacturing enterprises. Wirtz and Balzer (2023) [20] systematically reviewed the effects of social media marketing through empirical research, thereby demonstrating the effectiveness of digital marketing strategies in practical operations.

## 6 Conclusion and Future Prospects

This paper analyzes the impact of digital marketing on the development of the cultural industry from the perspectives of the integration of digital technology and the cultural industry, digital marketing strategies, and policy guidance for the development of the digital cultural industry, finding that digital marketing has become a driving force for the high-quality development of the cultural industry. With the continuous penetration and evolution of digital marketing in the cultural industry, future research should delve deeper into the following six areas:

1. Develop more new indicators to measure the impact of digital marketing: existing indicators mainly focus on financial performance and user stickiness, but the particularity of the cultural industry requires us to consider more non-material indicators such as brand value and cultural influence. The development of new indicators will promote a more comprehensive assessment of digital marketing strategies.

2. Strengthen interdisciplinary research: combining theories and methods from sociology, psychology, and other disciplines to study how digital marketing affects consumer behavior and the dissemination of cultural values will help understand the dissemination mechanisms and consumption patterns of cultural products in the digital media context.

3. Discussion on data privacy and marketing ethics: with the rise of data-driven marketing strategies, user privacy protection has become a hot topic. Future research should focus more on the reasonable collection and utilization of user data to ensure that marketing activities comply with ethical standards and legal requirements.

4. Empirical research and case studies: Collect more digital marketing practice cases to reveal which strategies are effective and which measures may backfire through empirical research. In particular, comparative analysis of regional differences and consumer culture will help in the localized implementation of digital marketing strategies.

5. In-depth study of the combination of digital technology and innovation: Exploring the application of technologies such as artificial intelligence, big data, and blockchain in the cultural industry, and how they create new value and user experiences for cultural products, as well as their long-term impact on corporate competitiveness.

6. Digital Marketing and Sustainable Development: Research on how to better integrate digital marketing with the sustainable development of the cultural industry,

such as promoting cultural activities and products related to environmental protection and social responsibility through digital marketing platforms.

## References

1. Hu Qiyuan. (2023) Digital Interaction in the Integration and Innovation of the Cultural Industry[J]. *Shanghai Informatization*, Issue 7: 14-18.
2. Huang Bin, Niu Jiaru. (2023) How Can the Digital Cultural Industry 'Break the Circle'? [J]. *Economy*, Issue 7: 56-59.
3. Gao Mengtong. (2023) Ideas and Strategies for High-Quality Development of Cultural and Creative Media Industry under the Digital Economy[J]. *China Media Technology*, Issue 6:60-64.
4. Computational Intelligence And Neuroscience. (2023) Retracted: Design of a Multimedia-Assisted Distance English Teaching System for College Students[J]. *Computational intelligence and neuroscience*,vol.2023,no.1:n/a - n/a.
5. Hamed Pouraram, Farideh Afshani, Maryam Ladaninejad. (February 2023) What do we Need to Start a Multimedia Salt Reduction Campaign? [J]. *International Journal of Preventive Medicine*,vol.14,no.1:28.
6. Guan Hao. (2023) Digital Technology: The “Activator” of Cultural Digitalization Development [J]. *East China Science and Technology*, Issue Two: 21.
7. Richard Heersmink. (2023) Materialised Identities: Cultural Identity, Collective Memory, and Artifacts[J]. *Review of Philosophy and Psychology-Article*,vol.14:249-265.
8. Hung-Tai Tsou, Ja-Shen Chen. (2023) How does digital technology usage benefit firm performance? Digital transformation strategy and organisational innovation as mediators[J]. *Technology Analysis & Strategic Management*,vol.35,no.9:1114-1127.
9. Giuseppe Aceto, Valerio Persico, and Antonio Pescapé. (2019) A Survey on Information and Communication Technologies for Industry 4.0:State-of-the-Art, Taxonomies, Perspectives, and Challenges. *IEEE COMMUNICATIONS SURVEYS & TUTORIALS*, vol.21, no.4:3467-3501.
10. Ron Davies. (2015) Industry 4.0 — Digitalisation for productivity and growth. EPRS|European Parliamentary Research Service, Briefing, Members' Research Service, Pe.568.337.
11. Ian D.Peake, Abhijay Vuyyuru, Jan Olaf Blech, Nicolas Vergnaud, and Lasith Fernando. (2015) Cloud-based analysis and control for robots in industrial automation.2015 IEEE 21st International Conference on Parallel and Distributed Systems (ICPADS),14-17:837-840.
12. I.Mezgár. (2011) Cloud computing technology for networked enterprises. *IFAC Proc*, vol.44, no.1:11949-11954.
13. G. Putnik et al. (2013) Scalability in manufacturing systems design and operation: State-of-the-art and future developments roadmap, *CIRP Ann*, vol.62, no.2:751-774.
14. Yuan Shuai. (2023) Financial Pathways of Digital Culture[J]. *Xiaokang*, Issue 1 2: 45-46.
15. Petra Kinga Kézai, János Rechnitzer. (2023) Performance of enterprises in cultural and creative industries in large Hungarian cities between 2008 and 2018[J]. *Regional Statistics*,vol.13,no.1:1-32.
16. Bai Yang. (2023) Data-driven Marketing is a Long Way to Go, but It is Imperative[J]. *Modern Home Appliances*, Issue 6: 34-37.
17. Pham Thi Phuong Dung, Ho Minh An, Pham Quoc Huy. (2023) Understanding the startup's intention of digital marketing's learners: An application of the theory of planned behavior

- (TPB) and technology acceptance method (TAM) [J]. *Cogent Business & Management*, vol.10, no.2:2219415.
18. Naheed Bashir, Khaleel Malik. (2023) Developing firm capabilities to utilise social media for the fuzzy front end of innovation[J]. *Technology Analysis & Strategic Management*, vol.35, no.6:721-736.
  19. Xiu Jie. (2023) Analysis of Differentiated Marketing Strategies for Traditional Manufacturing Enterprises under the Digital Economy[J]. *National Circulation Economy*, Issue 15: 92-95.
  20. Wirtz, Bernd W, Balzer, Isabell. (2023) Social Media Marketing – A Systematic Review of Quantitative Empirical Studies[J]. *Journal of Business and Management; Fort Collins*, vol.29, no.1:80-114.

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