

Research on the Development and Innovation Path of Digital Products in the Era of Digital Economy

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Abstract: In the tide of the vigorous development of the digital economy, cultural and creative products, as the result of the deep integration of culture and science and technology, are expanding their development and innovation paths at an unprecedented speed, showing distinct characteristics of diversification, intelligence, and globalization. On the one hand, diversification has become the core driving force for the innovation of cultural and creative products. Designers delve deeply into the essence of traditional culture while integrating modern aesthetics and multicultural elements, creating products with cultural heritage that align with contemporary trends, meeting the diverse spiritual and cultural needs of different consumer groups. From handicrafts to digital artworks, from the activation and utilization of traditional cultural IP to cross-border collaborations, cultural and creative products are increasingly rich in form and connotation. On the other hand, the wide application of intelligent technology has given new vitality to cultural and creative products. Cutting-edge technologies such as artificial intelligence, big data, and virtual reality have been cleverly integrated into various aspects of creative design, production, manufacturing, marketing, and promotion. This integration not only enhances the interaction, experience, and personalized customization of products but also promotes the digital transformation and upgrading of the cultural and creative industry. Consumers can enjoy an immersive cultural experience through smart devices, making cultural and creative products more vivid and interesting, and bringing them closer to users. In addition, the trend of globalization has accelerated the international exchange and dissemination of cultural and creative products. With the rise of cross-border e-commerce platforms and the gradual reduction of international trade barriers, excellent cultural and creative products from China and around the world have been able to transcend geographical restrictions and display their unique charm on a global scale. This has not only promoted the exchange and mutual learning of cultural diversity but also opened up new market space for cultural and creative enterprises, and promoted the prosperity and development of the global cultural and creative industry.

1. Development status of cultural and creative products

1.1. Objective Factors

Economic development is the cornerstone of the prosperity of the cultural and creative products industry. With the steady growth of the global economy and the increase in people's income, demand for cultural consumption is growing stronger, providing a broad market space for cultural and creative products. According to the 2024-2030 China Cultural and Creative Products Industry Competition Pattern Analysis and Investment Development Research Report, the global market size of cultural and creative products in 2023 was approximately 141.674 billion US dollars, an increase of 9.5 percent year-on-year, and is expected to reach 155.133 billion US dollars in 2024. The proportion of cultural and creative products in the overall market has steadily increased, demonstrating significant market potential and broad prospects. For example, according to data from the 2023 CSF Cultural Conference, the proportion of cultural and creative products in the overall market reached 14 percent, up 6.5 percent year-on-year.

The rapid development of digital technology has undoubtedly propelled the innovation of cultural and creative products, opening up unprecedented creative space. [1]The application of virtual reality (VR) technology enables consumers to experience the unique charm of cultural and creative products immersively. [3]Whether it is the reproduction of historical scenes or the conception of future worlds, VR vividly presents these in virtual space, greatly enhancing product immersion and interaction. Augmented reality (AR) technology, by superimposing virtual information on the real world, brings users an unprecedented visual feast, making cultural and creative products more three-dimensional and fresh, and stimulating consumers' desire to explore and purchase. The integration of artificial intelligence (AI) enables the personalized customization and intelligent service of cultural and creative products. AI algorithms can analyze users' preferences and behavioral data, accurately recommending cultural and creative products that match their tastes, and providing one-to-one customized services. Additionally, AI plays a significant role in creative design and content generation. [2]Through automated learning and creation, AI can accelerate the iteration and upgrading of cultural and creative products, enhancing their innovation and competitiveness.

Furthermore, the development of digitalization and networking has opened new channels for selling cultural and creative products. Digital platforms, such as e-commerce, social media, and short video platforms, offer broad display spaces and convenient purchasing options for cultural and creative products. Consumers can browse cultural and creative products from around the world with a click of the mouse or a swipe of the screen, making online purchases and leaving reviews. This convenience and immediacy have greatly promoted the market circulation and consumption growth of cultural and creative products.

1.2. Subjective Factors

Creative talents, as the soul and core driving force for the vigorous development of cultural and creative industries, are of self-evident importance. In this ever-changing era, outstanding creative talents can rely on keen insight, extraordinary imagination, and excellent innovation skills to skillfully integrate traditional culture with modern elements, creating cultural and creative products that meet market demand and are rich in cultural heritage. These products can not only touch people's hearts and arouse resonance but also stand out in the fierce market competition and become trend-leading vanes. Taking Beijing's 798 Art Zone as an example, the area's transformation from an abandoned industrial plant to an internationally renowned creative industry park fully demonstrates the key role creative talents play in the development of cultural and creative products.

The 798 Art Zone has not only attracted many domestic and foreign artists, designers, and cultural and creative enterprises to settle in but also become a hot spot for the exchange, collision, and cooperation of creative talents. Various galleries, design studios, and fashion stores have sprung up in the zone. With unique perspectives and innovative ideas, they have perfectly integrated traditional culture and modern art to create a series of cultural and creative products with distinctive characteristics and market competitiveness. To continuously attract and cultivate creative talents, the 798 Art Zone regularly holds creative competitions, providing a stage for young people to showcase their talents and realize their dreams. These competitions not only excavate many new designers and artists but also promote the exchange and dissemination of creative ideas and inspire more innovation. At the same time, the art district has also actively established contacts with the international creative industry by holding international art exhibitions, exchange forums, and other activities to build a bridge for local creative talents to integrate with the international community, allowing them to absorb advanced international design concepts and technologies and constantly improve their competitiveness. The successful practice of the 798 Art Zone has proved the importance of creative talents to the development of cultural and creative products, as well as the efforts and effectiveness of the government and all sectors of society in attracting and cultivating creative talents. This case provides valuable experience and inspiration for other regions: only by continuously increasing investment and support for creative talents can we promote the development of cultural and creative industries to achieve higher quality.

2. The Enabling Role of the Digital Economy for Cultural and Creative Products

2.1. The Digital Economy Empowers the Production of Cultural and Creative Products

In the era of the digital economy, digital creation tools such as digital drawing boards, 3D modeling software, virtual reality (VR), and augmented reality (AR) equipment are widely used, greatly reducing the threshold and cost of cultural and creative product creation. [4] Creators can make use of these tools for efficient and convenient creation and realize the rapid transformation and presentation of ideas. At the same time, they also provide a rich library of materials and special effects resources, making the visual effects of cultural and creative products more diversified and satisfying the growing aesthetic needs of consumers. The application fields of digital creation tools are constantly expanding from the traditional fields of painting and design to film and television production, game development, virtual reality, and other fields. With the popularity of cloud computing and mobile technology, more and more digital creation tools have begun to support online collaboration and real-time updates, making remote work and team collaboration easier.

2.2. The Digital Economy Empowers the Dissemination of Cultural and Creative Products

The digital economy provides diversified channels and paths for the dissemination of cultural and creative products. With the rise of emerging media such as the Internet, social media, and e-commerce platforms, cultural and creative products can break through geographical and time constraints and quickly spread to all parts of the world. Creators can publish and promote their works through social media platforms such as Weibo, WeChat, and Douyin to attract fans' attention and purchases. Meanwhile, e-commerce platforms also provide convenient channels for the sale of cultural and creative products, and consumers can browse, buy, and evaluate products online.

2.3. The Digital Economy Empowers the Consumption of Cultural and Creative Products

The digital economy has stimulated consumers' consumption potential and demand for cultural

and creative products by optimizing the consumption experience and improving consumption convenience. For example, virtual reality technology provides consumers with an immersive shopping experience, allowing them to try on and test cultural and creative products in a virtual environment. Convenient payment methods such as mobile payment and online payment have simplified the purchase process and improved the convenience of consumption. All these measures have greatly improved consumers' shopping experience and satisfaction, thus stimulating their purchase desire and consumption demand for cultural and creative products.

The digital economy has also promoted the customization and personalized service of cultural and creative products. Using big data and artificial intelligence technology, consumers' individual needs and preferences can be analyzed to provide them with tailor-made cultural and creative products. For example, different styles of cultural and creative products can be designed according to consumers' age, gender, occupation, and other characteristics; similar or related cultural and creative products can be recommended based on consumers' interests and purchasing history. Such customized and personalized services not only meet the individual needs of consumers but also improve the added value and market competitiveness of cultural and creative products.

3. The Innovation Path of Cultural and Creative Products

3.1. Use Digital Technology to Enrich Product Forms

In the process of using digital technology to enrich the form of cultural and creative products, increasing core technology research and development efforts and capital investment is key to promoting industry innovation and improving product competitiveness. By continuously investing resources in cutting-edge scientific and technological fields such as artificial intelligence, big data, cloud computing, and virtual reality, we can further promote the deep integration of technology and cultural creativity, creating cultural and creative products with more market potential and added value. Taking digital artworks as an example, through the innovative application of AI algorithms, traditional artistic creation techniques can be transformed and improved. [6]This allows creators to produce works that combine traditional and modern elements, meeting contemporary consumer demand for culture and aesthetics. At the same time, the promotion and popularization of digital technology have also lowered the barriers to entry for cultural and creative products, enabling more individuals and small and medium-sized enterprises to participate in the industry and jointly promote the prosperity and development of the cultural and creative field.

In addition to increasing technological investment, collaboration and resource sharing between industries are crucial. By strengthening cooperation between cultural, creative, technology, and media industries, we can integrate resources, share expertise, and leverage the advantages of different fields. This interdisciplinary collaboration can give rise to more innovative products and services, meeting the diverse needs of consumers. For instance, cooperation between the game industry and the cultural industry can create educational games that incorporate cultural knowledge and traditional stories, providing a new way for cultural heritage to be passed down to future generations. Such cooperation not only enriches the form of cultural and creative products but also expands the market and audience for these products.

Furthermore, the innovation path of cultural and creative products also involves exploring new business models and marketing strategies. [5]By adopting flexible and diverse business models such as the freemium model, subscription services, and crowdfunding, cultural and creative enterprises can explore new revenue streams and reduce business risks. Meanwhile, through digital marketing methods such as social media marketing, influencer marketing, and content marketing, companies can more accurately reach their target audience and enhance brand influence and product awareness. Combining these innovative business models and marketing strategies with the continuous

advancement of digital technology can further drive the development of the cultural and creative industry, leading to a more prosperous and dynamic future.

In conclusion, the development and innovation of cultural and creative products in the era of the digital economy are inseparable from the deep integration of technology, culture, and creativity. [7]By increasing investment in core technology research and development, promoting interdisciplinary collaboration, and exploring new business models and marketing strategies, we can continuously enrich the forms of cultural and creative products, enhance their market competitiveness, and promote the sustainable development of the industry.[9] Through these efforts, cultural and creative products will not only meet the diverse and personalized needs of consumers but also contribute to the inheritance and dissemination of cultural heritage, playing an increasingly important role in the global economy and cultural landscape.

3.2. Cross-border Integration to Enrich Cultural Connotation

In the context of digital technology empowering cultural and creative product innovation, the promotion of cross-border integration is an important innovation path. By strengthening cooperation and resource sharing between different fields, such as culture, technology, art, and commerce, we can create richer, more diverse, and culturally connotative products. For example, in the design and development of cultural and creative products, we can use technologies such as artificial intelligence and big data to deeply analyze traditional cultural elements, and through digital means, combine them with modern design concepts to create products that integrate traditional culture and modern fashion. In this way, not only the traditional cultural heritage is carried forward, but also the innovative vitality of cultural and creative products is enhanced, giving consumers a refreshing experience. At the same time, cross-border integration also helps expand the market space for cultural and creative products, making them more competitive in the international market. Through international cultural exchanges and cooperation, we can introduce more excellent cultural and creative products to the world, spreading Chinese culture and values [8].

3.3. Personalized Customization to Meet Diverse Needs

Under the trend of digital economy development, personalized customization has become an important development direction for cultural and creative products. By leveraging digital technologies such as artificial intelligence, big data, and cloud computing, cultural and creative enterprises can accurately grasp consumers' personalized needs and provide customized products and services accordingly. For example, through AI algorithms, consumers' purchasing preferences and behavioral data can be analyzed to recommend cultural and creative products that meet their individual needs. Additionally, through online customization platforms, consumers can participate in the design and production process, choosing elements such as colors, patterns, and materials according to their preferences, creating unique cultural and creative products. [10]This personalized customization model not only enhances the user experience but also increases consumers' emotional attachment and loyalty to the product, providing new opportunities and growth points for the cultural and creative industry.

4. Conclusion

In summary, cultural and creative products, as products of the deep integration of culture and technology, have shown unprecedented development and innovation vitality in the era of the digital economy. [11]Through the promotion of digital technology, cultural and creative products are becoming more diversified, intelligent, and globalized, providing consumers with richer and more

varied spiritual and cultural experiences. At the same time, digital technology has also lowered the barriers to entry for cultural and creative products, allowing more individuals and enterprises to participate in the creation and innovation of cultural and creative products, promoting the prosperity and development of the cultural and creative industry. In the future, we need to continuously strengthen investment and innovation in core technology, promote cross-border integration and interdisciplinary cooperation, and explore new business models and marketing strategies to drive the sustainable development of cultural and creative products. By doing so, we can meet the diverse and personalized needs of consumers, inherit and carry forward the essence of traditional culture, and make cultural and creative products a bright spot and growth point in the global economy and cultural landscape. Through these efforts, cultural and creative products will continue to shine and thrive in the era of the digital economy, bringing endless joy and inspiration to people.

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