

# Research on Converged Media Technology Innovation and Digital Publishing Development Strategy Postprint

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## Abstract

There exists a close relationship between converged media technology and digital publishing, wherein the two can mutually promote each other to achieve rapid development. [Objective] To actively respond to the transformations and challenges in the digital publishing industry, enhance digital publishing content quality and dissemination efficiency by leveraging converged media technology, provide support for industrial convergence and innovative development, and thereby elevate the international competitiveness of the domestic digital publishing industry. [Methods] Employing methods such as categorical summarization, comparative analysis, and quantitative and qualitative research, this study primarily centers on analyzing the close relationship between converged media technology and digital publishing development, and conducts in-depth research on converged media technology innovation approaches and digital publishing development strategies. [Results] Converged media technology innovation can drive digital publishing development, while digital publishing development can spur converged media technology innovation. [Conclusion] The development of the digital publishing industry is inseparable from converged media technology innovation, and the expansion of converged media technology coverage requires support from digital publishing development. Only by achieving the organic integration of converged media technology and digital publishing can desired outcomes in industrial reform and transformation be attained.

## Full Text

### Research on the Innovation of Converged Media Technology and Development Strategies for Digital Publishing

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## Abstract

There exists a close relationship between converged media technology and digital publishing, where the two can mutually promote each other to achieve rapid development. **[Objective]** To actively respond to the transformation and challenges in the digital publishing industry, enhance digital publishing content quality and dissemination efficiency by relying on converged media technology, provide support for industrial integration and innovative development, and thereby improve the international competitiveness of China's digital publishing industry. **[Methods]** This study employs classification and summarization, comparative analysis, and quantitative and qualitative research methods, focusing on analyzing the close relationship between converged media technology and digital publishing development, and conducting in-depth research on converged media technology innovation methods and digital publishing development strategies. **[Results]** The innovation of converged media technology can drive the development of digital publishing, while the development of digital publishing can, in turn, force the innovation of converged media technology. **[Conclusion]** The development of the digital publishing industry cannot be separated from the innovation of converged media technology, and the expansion of converged media technology coverage requires the support of digital publishing development. Only by achieving the organic integration of converged media technology and digital publishing can ideal results in industrial reform and transformation be obtained.

**Keywords:** converged media technology; innovation consciousness; digital publishing; data reconstruction; marketing

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## 1.2 Digital Publishing Forces Innovation in Converged Media Technology

The development of digital publishing not only requires the support of converged media technology but also forces its innovation. Digital publishing enhances the flexibility and efficiency of content production, and to achieve these goals, it typically raises the requirements for converged media technology, strengthening innovation in content collection, editing, and other segments to meet the demands of digital publishing [2]. Meanwhile, as digital publishing products primarily rely on networks for dissemination, converged media technology can achieve innovation in data transmission and distribution, facilitating rapid and widespread content propagation [3]. Furthermore, the development goal of digital publishing is to satisfy users' personalized reading needs and help them

effectively utilize fragmented time, and the innovation of converged media technology serves as an effective means to achieve these objectives.

## 2. Strategies for Converged Media Technology Innovation

**2.1 New Technology-Driven Innovation** In converged media technology innovation, it is essential to adhere to mobile new media platforms as the core and strengthen the introduction of advanced scientific technologies. Technologies such as AR virtual reality and 4K/8K standards can significantly improve media information transmission efficiency and enhance media service quality. Taking the broadcast coverage of the Hangzhou Asian Games by China Media Group as an example, the 4K/8K standard was employed for the first time to provide international public signals and other types of media services to the global audience. The application of AR virtual technology in the opening and closing ceremonies, combined with the multi-platform dissemination advantages of all-media, achieved a breakthrough in media industry development and innovated the scale of event reporting, setting a new record for total audience reach across all media platforms [4].

**2.2 Data Reconstruction** Converged media technology innovation also includes data reconstruction, encompassing the reconstruction of content data, user data, and operational data, while achieving effective connection with user terminals. Through data reconstruction and statistical analysis, media organizations can better grasp users' personalized needs and enhance the level of intelligent content production. Some publishing units have chosen to utilize "Creative Brain AI+," which integrates multiple artificial intelligence technologies. Empowered by AI, this technology can accomplish intelligent collaboration and production of content, building an efficient automated and intelligent work platform that provides technical support for the rapid development of the publishing industry [5]. Additionally, technical departments should prioritize data privacy protection by establishing data privacy protection mechanisms and introducing security verification technologies such as facial recognition and fingerprint verification to construct a security assurance system, thereby preventing the leakage of confidential information during data reconstruction.

**2.3 Business Process Reengineering** Business process reengineering constitutes an important component of converged media technology innovation. Relevant departments should adopt a long-term perspective on the publishing industry's development, broaden their business horizons, and establish development goals and directions based on the actual development of the media industry to provide a solid foundation and scientific guidance for process reengineering [6]. Simultaneously, understanding and evaluating existing business processes is a key task that requires enhanced analysis of process execution effectiveness and strengthened data collection to lay a good foundation for process reengineering. In the reengineering process, publishing units can utilize all-media convergence platforms to uniformly manage and distribute text, video, and other materials,

employ artificial intelligence technology to create precise audience profiles, and recommend personalized content based on their preferences, thereby improving audience satisfaction and strengthening the bond between media organizations and their audiences.

### 3.1.1 Development Goals

To further achieve media convergence and promote digital publishing development, relevant departments should clarify the development goals of digital publishing to provide scientific guidance for various tasks. First, digital publishing development should adhere to the principle of digitalization driving modernization, encourage independent innovation among all units, clarify industrial clustering objectives, intensify the construction of industrial clusters, strengthen the attractiveness of digital publishing by building core digital publishing industry clusters, and enhance the international competitiveness of domestic digital publishing through cluster effects. Second, publishing units should prioritize the integration of publishing content with advanced technology, organically combining high-quality publishing content with digital technology based on social needs to ensure that digital publishing reflects the spirit of the times and inherits excellent traditional Chinese culture. Third, digital publishing development should place market and benefits on equal footing, focusing on market research to understand market demands and dynamic changes, adjusting digital publishing product types and service models accordingly to meet the diversified needs of audiences. Regarding economic benefits, relevant departments should construct new business forms, models, and patterns to expand the industry's economic development space [7]. Finally, digital publishing development goals should also include policy and planning guidance, with government functional departments increasing policy support and creating a favorable digital publishing environment for leaders at all levels of press and publication administrative departments to achieve orderly industrial development.

### 3.1.2 Development Positioning

In digital publishing development, publishing units and departments must clarify their development goals and positioning. First, digital publishing constitutes a component of the cultural industry, and the publishing process should emphasize the promotion of excellent traditional culture and the dissemination of scientific and cultural knowledge, demonstrating the value of the publishing industry while providing audiences with quality cultural and knowledge education. Second, digital publishing serves as a frontier for technological innovation, providing broader application and development space for new technologies. Through integration with advanced scientific technologies, the production efficiency and product quality of the publishing industry can be significantly improved [8]. Finally, digital publishing forms an important foundation for countries to enhance their competitiveness in the international cultural market. Regarding digital publishing product development and service innovation, efforts should

focus on practicing socialist core values and disseminating the Party' s theoretical innovation achievements, strengthening the research and development of diversified and high-quality digital publishing products to elevate the level of spiritual civilization construction.

### 3.2.1 Content Selection and Optimization

For digital publishing development, innovative concepts and methods should be integrated from the content production level. First, relevant departments should enhance awareness of diversified content production, strengthen the utilization of big data technology and AI technology, gradually complete the customization of personalized content, and accurately push content such as images, text, audio, and video to audiences. This makes content production more innovative and diverse, ensuring that the basic needs of various users are met. Second, digital publishing units should focus on strengthening original content by providing more encouragement to authors, editors, and other staff members, investing more time and energy in original content production to create in-depth, high-quality works. Measures such as providing creative funds can mobilize the enthusiasm of relevant workers and thereby achieve innovation in publishing content [9]. Finally, when conducting digital publishing, publishing units should construct a thematic publishing model, focusing on theme planning around national policies, theories, and some emergency events, and reasonably designing thematic publishing activities. Information dissemination through digital publishing methods such as video courses and e-books can ensure the authority of publishing content while enhancing the influence of digital publications.

### 3.2.2 Quality Improvement and Standard Setting

Digital publishing content innovation also requires attention to quality improvement and standard setting to provide endogenous momentum for digital publishing development. Therefore, publishing units should strengthen quality control of publishing content, establish a sound content review mechanism, and significantly improve publication quality by ensuring the legality and authenticity of content while performing editing and proofreading work. Simultaneously, publishing units should clarify unified standards related to publishing content based on actual conditions to regulate the digital publishing market and lay a good foundation for improving industry development standards. Digital publishing technology updates rapidly in short cycles, making it difficult to ensure products have long life cycles. If traditional content creation standards are still adopted, it is difficult to guarantee content quality and meet the development requirements of the publishing industry. To this end, publishing units should improve existing standards by comprehensively considering the characteristics of digital publishing and clarifying the attributes and requirements of digital publishing. For example, when customizing standards for e-book content, adjustments and improvements should be made from aspects such as metadata and content format to provide basic guarantees for the publishing quality and subsequent

distribution of e-books [10]. Furthermore, publishing units should adhere to the principle of multi-party participation and joint formulation, strengthen exchanges and collaboration with industry associations, government departments, and research institutions, respect and adopt reasonable opinions and suggestions from all parties, and further ensure the operability of digital publishing standards.

### 3.3.1 Technical Foundation and Innovation

Digital publishing development cannot be separated from technical support, and publishing units should focus on promoting technology integration and strengthening the introduction and utilization of advanced scientific technologies. First, publishing units should prioritize research on big data and cloud computing technologies to provide data processing capabilities for digital publishing, enabling the storage of large amounts of data information and analyzing collected user data to grasp market dynamics and meet audience needs. Relying on cloud computing platforms, publishing units can effectively control publishing costs and lower the threshold for publishing technology, providing support for the expansion of publishing institutions [11]. Second, publishing units should actively apply artificial intelligence technology, strengthening its integration with content creation, typesetting, review, and other work segments to assist creators and thereby improve digital publishing quality. For example, the application of AIGC technology can achieve programmatic writing, which not only innovates the production form of digital publishing content but also improves writing efficiency, bringing stronger momentum to the rapid development of the publishing industry. Finally, publishing units can strengthen the application of blockchain technology in digital publishing. With the support of smart contract functions and distributed ledgers of this technology, a solid foundation can be provided for the control of infringement acts.

### 3.3.2 Integrated Application Practice

After completing technology integration and innovation, publishing units should strengthen integrated application practice in digital publishing. Units can enhance awareness of intelligent editing and review by developing intelligent editing and review systems through natural language processing technology and machine learning technology, designing automatic recognition functions to automatically correct errors such as typos in texts, and ensuring the standardization and accuracy of digital publishing content. Simultaneously, publishing units should build personalized recommendation and customization models, comprehensively analyze all user preference information, understand user behavior habits, and recommend exclusive content to users and provide customized services with the support of digital publishing platforms, which helps improve user satisfaction [12]. Furthermore, publishing units should emphasize cross-media integration, break through the limitations of traditional publishing models, transform the single text publishing form, and integrate diversified information such as audio,

video, text, and images in publishing content to enhance the expressiveness of publishing content. Based on this, publishing units can focus on IP development and actively adopt cross-border integrated publishing methods, such as transforming books into digital works like animation and games, or developing special co-branded products through exchanges and cooperation with well-known institutions in the industry, which helps improve the digital publishing industry chain.

### 3.4.1 Building Multi-Channel Marketing Strategies

Marketing is an important means to expand publishing development space, and only by ensuring market demand can momentum be provided for publishing. Therefore, publishing units should strengthen cooperation with websites, such as professional and platform-based websites, to establish new online marketing channels based on actual conditions, adhering to the principle of mutual benefit and cooperation. They should also value collaborative cooperation with digital libraries and e-commerce platforms, as listing digital publishing products on these platforms and reading apps helps expand the market coverage of digital publishing. Simultaneously, marketing departments should focus on building social media marketing models, such as cooperating with social media platforms like Douyin, WeChat, and Weibo, and releasing digital publishing content through multiple channels to expand user groups. Publishing units also need to intensify the promotion of mobile marketing channels, developing specialized mobile reading applications based on their own development levels, and adopting pre-installation cooperation and other forms to mobilize user enthusiasm and increase client downloads [13]. Furthermore, publishing departments should increase their emphasis on various marketing activities, building online and offline marketing activity models, such as regularly organizing lectures, book signings, and reading clubs for users, which effectively enhances reader attraction and expands user groups. Publishing units can also build O2O marketing models, strengthening the integration of online booking and offline book pickup to provide readers with more convenient experiences, thereby increasing the purchase rate of digital publications.

### 3.4.2 Optimizing Marketing Content

In addition to marketing models, marketing content is also an important factor affecting digital publishing quality. To further promote digital publishing development, publishing units should intensify efforts to optimize marketing content. Therefore, units should focus on improving content quality, ensuring the richness of reading resources, and obtaining diversified reading resources through market research and data collection, which can then be professionally processed to form digital readings that meet their own development characteristics and readers' personalized requirements. Simultaneously, publishing units should appropriately add relevant information such as author interviews, book reviews, and creative backgrounds to digital publishing content to attract readers and

gain more attention. Publishing units can adopt interactive marketing methods, utilizing content such as book sharing and essay competitions in marketing, and setting up special award levels to mobilize readers' enthusiasm and expand the influence of marketing activities. Furthermore, publishing units should closely monitor market dynamics and adjust marketing content according to market demands and development trends to reduce the time and cost invested in marketing and provide sufficient momentum for digital publishing development [14].

### **3.5.1 Building a Sound Legal and Regulatory System**

The stable development of digital publishing cannot be separated from a good security environment, and copyright protection is an important measure to maintain orderly industry development. Therefore, publishing departments should actively seek support from government functional departments, enhance awareness of legal and regulatory improvement, adapt to digital publishing development trends, and build a sound legal and regulatory protection system [15]. Simultaneously, relevant departments should adhere to the principle of targeted legislation, focusing on analyzing some common digital copyright issues, and issue corresponding laws and regulations based on the analysis results to clarify the requirements for the use, ownership, and transfer of digital copyrights, which helps reduce copyright disputes in digital publishing and effectively protect the legitimate rights and interests of relevant personnel.

### **3.5.2 Strengthening Administrative Supervision and Law Enforcement**

Regulatory departments should intensify supervision of the digital publishing industry, clarify their regulatory functions and responsibilities, avoid excessive fragmentation of management functions, and emphasize coordination and cooperation among different departments to gradually form a joint force in digital publishing supervision. Simultaneously, they should give full play to the regulatory and crackdown roles of law enforcement departments, focusing on investigating infringement and piracy behaviors in the digital publishing industry. Through regular or irregular law enforcement inspections, problems can be discovered in a timely manner, or by increasing the cost of violations, the enthusiasm for illegal activities among those with ulterior motives can be weakened. Furthermore, to achieve ideal copyright protection effects, copyright protection should start from the root cause, with regulatory and law enforcement departments coordinating and cooperating to do a good job in industry publicity, enhancing the copyright protection awareness of digital publishing units or individuals, guiding them to correctly understand copyright and the importance of copyright protection, and thereby reducing piracy and infringement behaviors.

## **3.6 Optimizing Digital Publishing Talent Structure**

Digital publishing professionals are an important foundation for industry development, and their professional competence and comprehensive quality directly

affect industry development levels. Therefore, publishing units should focus on strengthening the construction of digital publishing professional talent teams and building a composite talent pool. First, publishing units should adjust their internal talent structure, clarify the human resource allocation needs of various departments, and reasonably set up relevant positions such as multimedia editors, product managers, marketing managers, database administrators, and copyright operation personnel. Based on analysis of position types, educational levels, and work experience for different positions, more targeted talent recruitment standards should be formulated. Second, for applicants, publishing units should conduct strict screening to understand their professional skill levels, work attitudes, and career plans, and organize those who pass the screening to participate in pre-job training to learn digital publishing professional knowledge and engage in studies on publishing regulations, digital technology, and market trends to improve their business capabilities and environmental adaptability. Finally, digital publishing units should establish a sound performance evaluation mechanism to motivate staff to actively engage in work, thereby improving work quality and efficiency and enhancing digital publishing development.

Digital publishing is one of the main development trends in the current publishing industry. Adopting digital publishing models can significantly improve publishing efficiency, expand publication marketing channels and reader coverage, and lay a foundation for the rapid and stable development of the publishing industry. By strengthening research on digital publishing development trends and strategies, publishing units can provide a basis for industry strategic development planning. Moreover, relying on converged media technology and strengthening technological innovation can provide support for the efficient implementation of related work, enhance the effectiveness of industry development and construction, and thereby improve the industry competitiveness of publishing units. Regarding the future development of the publishing industry, relevant departments should focus on innovating the integration methods of converged media technology and digital publishing to build a sound system for the rapid development of digital publishing.

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