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Editor：Xu Weiyi
Email：745191603@qq.com
Typesetter：Ai Lin

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China's Publishing Industry Accelerates AI Technology Adoption

■ By Xu Weiyi

From the metaverse, blockchain, VR, and AR to the phenomenal emergence of AIGC, intelligent technologies are updating at an unprecedented pace, profoundly influencing every aspect and the whole cycle of the publishing industry. Since OpenAI released its ChatGPT large language model in late 2022, its popularity in publishing market has been consistently high. Chinese research institutions and enterprises have developed various large language models tailored to their business needs and strategic layouts, deepening the integration of AI technology and the publishing industry.

On August 1st this year, the *EU AI Act* officially came into effect. As the world's first comprehensive regulation on AI, this act marks a significant step forward in regulating AI applications within the EU. Ricardo Franco Levi, president of the Federation of European Publishers, stated, "In an environment where AI is increasingly misused, the EU has set a global standard for digital regulation, allowing AI to unleash its potential without infringing on others' rights."

Currently, Chinese publishing companies are actively enhancing the application of big data, cloud computing, AI, and blockchain technologies, driving innovation and deep integration within the publishing industry. Up to February 2024, 243 domestic units have developed a total of 260 large language models. These models, with their powerful language processing and generation capabilities, have significantly increased publishing efficiency through high-efficiency content generation, editing methods, and personalized content recommendation technologies. These models have significantly increased the publishing efficiency of books and are injecting new vitality into the publishing industry. Today, AI has entered the "fast lane" in China's publishing industry.

AI Reshapes the Future Ecosystem of Publishing

The rapid development and application of AI technology have brought unprecedented opportunities to the publishing industry.

China Publishing Group continues to explore and practice in the AI field. Encyclopedia of China Publishing House, leveraging its expertise in the encyclopedia domain, has built an AI corpus based on authoritative encyclopedic knowledge. Gulian Media Tech Corporation, in collaboration with Nanjing Agricultural University, launched the first large model for ancient text collation—"Xunzi" Ancient Book Large Language Model. This model incorporates a corpus of over 20 billion characters from ancient texts, including the "Siku Quanshu" (the Complete Library in the Four Branches of Chinese Literature), and it can achieve natural language understanding, automatic translation, poetry generation, and automatic indexing, among other functions. China National Publications Import and Export (Group) Corporation has partnered with 28 leading domestic and international publishing companies to provide new integrated solutions for public cultural service fields like libraries, focusing on a core technology of deep virtual-real integration, which is tailored to new cultural consumption scenarios. These companies are continuously advancing AI technology development and application.

Tan Fangzheng, editor-in-chief of Higher Education Press, stated that the press, utilizing AI technology, has focused on creating teaching assistants and editorial assistants. In September 2023, HEP, in collaboration with Zhejiang University and Alibaba Cloud, released the "Zhihai-Sanle" educational vertical large model, providing intelligent Q&A, test generation, learning navigation, and teaching evaluation services for core university courses and this model is becoming a practical AI teaching assistant and learning helper. Additionally, the press has partnered with technology companies to develop the "Zhixiao Yunchou" intelligent reviewing platform, enabling intelligent review of textbook content resources, which improves the accuracy and efficiency of textbook review.

In July this year, CITIC Press Corporation announced its digital and intelligent strategy. Firstly, building an intelligent publishing system for the entire publishing process. Secondly, creating a high-quality digital reading platform, CITIC Academy, for digital reading scenarios. Thirdly, launching the Zhixin Learning Platform for corporate learning scenarios. Fourthly, developing AI author digital human project for author-reader interaction scenarios.

Wu Lei, editor-in-chief of Times New Media Press (formerly Anhui Electronic & Audiovisual Publishing House), introduced that in digital publishing, his company undertakes the internal digital transformation work of Times Publishing Group, providing technical support for digital publishing forms for the group and various publishers. The press is specifically responsible for two key projects. One is implementing the construction of the key project for after-school services by Times Publishing, undertaking the development of the intelligent management platform for after-school services and the development of after-school service courses. The other one is taking on the innovative work of digital transformation for Times Publishing, applying emerging technologies such as generative AI in the publishing industry.

Chinese Publishers Discuss New "Publishing + AI" Scenarios

Zhuang Hongquan, vice president of Tsinghua University Press, stated that the press is actively exploring innovation in the AI revolution, developing the SciOpen international digital publishing platform for scientific journals. This platform supports new publishing models such as enhanced publishing and data publishing, and provides intelligent recommendation, academic profiling, knowledge graph, and research trend analysis services, thus fully enhancing the ability to serve scientific research innovation. TUP's "AI-based Intelligent Manufacturing Knowledge Service System" tags, associates, and matches multimodal data, dynamically generates knowledge graphs, and offers intelligent chatbot services. Additionally, the "Thesis Writing Package" service of the Wenquan Academy Knowledge Base, released earlier this year, integrates intelligent proofreading tools, providing text proofreading services based on different types of theses, and offering proofreading services for thesis text content via big data analysis.

Jin Gengda, general manager of Zhejiang University Press, stated that the integration of AI and the publishing industry is comprehensive and covers every stage of the entire publishing cycle. For instance, AI can evaluate topic selection overall, helping editors understand the topic value and user needs, thus determining the direction of production for publishers.

Chen Haijuan, vice president of China Machine Press, noted that AI technology is widely used in the translation of foreign books, significantly improving publishing efficiency. Moreover, AI technology empowers the marketing work of publishers. For instance, AI creates "digital human avatars" for authors to help introduce book content and selling points, reducing the workload while allowing more readers to quickly grasp the essence of the book.

Zhou Su, president of the Higher Education Division of Beijing Normal University Publishing Group, stated that educational publishing should integrate AI technology's core characteristics through a "three-step process". The first is to achieve "digital grafting", the second is to remove the "digital prosthesis", and the third is to enjoy "digital rights". Editors will rely on AI technology's strong analytical capabilities, doing less "topic selection" and more "multiple-choice selections". They will be able to depend on the comprehensive control ability of humans over technology to judge which topics provided by AI applications are more likely to win readers. In the future, excellent educational publications will combine deeper educational content with more convenient publishing forms.

Addressing Technological Risks and Challenges: Strengthening Talent Development

Industry experts believe that while the integration of the publishing industry and AI technology is progressing quickly, attention must still be paid to issues such as data security and privacy protection, technological ethics and the moral considerations, and strengthening talent cultivation.

Xu Chenmin, president of Jiangsu Phoenix Electronic & Audiovisual Publishing House and general manager of Jiangsu Phoenix Numeral Media Corporation, stated that generative AI, with its unique content production methods, has become a new essential production force in the digital economy era. He stated, "To address the challenges posed by the rapid development of AI technology, our company has established a generative AI research and application team led by the community residents committee, involving the technology department, general editorial office, and various business production departments. Our aim is to enhance the compatibility of AI technology with existing platform projects, improving the quality and efficiency of content production and product development."

Li Yazheng, from the Department of Editing and Publishing Studies at the School of Journalism and Communication, Anhui University, believes that it is necessary to cultivate innovative intelligent publishing talents with three capabilities for intelligent publishing scenarios. First, at the cognitive level, they must have professional knowledge and innovative thinking related to intelligent publishing and a deep understanding of the essence of intelligent publishing. Second, at the ability level, they should strengthen their ability to apply intelligent technology, analyze and use data, and continuously learn. Third, at the attitude level, they should adhere to correct values and guard against ethical risks, with the aim of promoting the healthy development of the publishing industry.