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Digital Publishing for the Elderly Driven by AIGC

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Abstract

With the continuous development of digital technology and the arrival of an aging society, digital publishing for the elderly has gradually become a significant concern. How to use artificial intelligence technology to provide a more convenient, efficient, and comfortable digital reading experience for the elderly is the crucial goal of studying digital publishing for the elderly driven by AIGC. Against this background, it is of great practical and research significance to improve the digital reading literacy of the elderly, the quality and applicability of digital publications, and to construct the development strategy of publishing integration for the elderly driven by AIGC.

Keywords: AIGC, Digital publishing, Elderly groups, artificial intelligence

1. Introduction

In recent years, with the increasing aging of China's population, the demand for information acquisition by the elderly is growing, and digital reading is increasingly favored by the elderly. However, due to the gradual deterioration of physical function and cognitive ability of the elderly, they face many difficulties in using digital reading products, which has become an important factor restricting the development of digital publishing for the elderly. In order to solve this problem, we need to combine AIGC-driven technology to study digital publishing for the elderly and develop corresponding product applications to improve the digital reading experience of the elderly and meet their digital reading needs.

With the rise of mobile Internet, the ecological development of Internet creators has gradually developed from the era of professional content production (PGC) to AIGC. In the modern era, it has become easier to create content, and there are more ways to distribute it. However, this has led to an overload of information, and high-quality content can easily get lost in the shuffle. On the one hand, the elderly are an essential group in social life, and it is of great social value to provide them with digital publications with good usability; On the other hand, the demand for digital publications by the elderly is increasing, and the problem of unbalanced demand and supply still exists.

2. Literature Review and Research Background of AIGC

2.1 The meaning of AIGC

Since the emergence of artificial intelligence technology in the 1970s, AIGC (Artificial Intelligence, Genetics, and Cognitive Sciences) technology has been one of the important research directions in the field of artificial intelligence technology. AIGC uses artificial intelligence to generate the content you need, and GC means to create content. Thanks to the progress of statistical learning theory in the past 20 years and the commercial success of leading big data companies. They introduced the current development direction of machine learning and artificial intelligence. As a digital asset, AIGC can be preserved for a long time, which is convenient for dissemination and use. Articles and videos created by AI technology are gradually emerging in the content output of news media and publications. Artificial intelligence technology improves the efficiency of data analysis and processing, and various devices can be more intelligent and adaptive with the development of deep learning algorithms.

The AIGC technology has shown significant improvement in its performance and has proven to be successful in publishing for the elderly.

2.2 AIGC reform and market

The critical feature of AIGC is its openness. Compared with some closed intelligent systems in the industry, AIGC technology will be more open and flexible and can be applied and maintained in various forms, such as API (Application Programming Interface) and SDK (Software Development Kit). AIGC technology grants users greater control and enhances the versatility and speed of its application and promotion. AIGC does not own the human brain but is pieced together and substituted templates based on big data, and there is still great controversy on the generated content and copyright issues. Chat GPT, as the representative of the natural language processing model, has been trained with a large number of parameters to improve its model ability, from monomodal "evolution" to multi-modal simulation of the human brain, thus realizing the productivity transformation of artificial intelligence from unidirectional "perception" to comprehensive "cognition." Sundar believed that in the interactive experience between humans and intelligence, users' different understanding of AI, experience, and critical thinking tendencies would impact users' evaluation of AI. For example, in over-trust, users may completely transfer the information screening profession to AI, believing all the results output by AI and aggravating the risk of user behavior decision-making. Guo Tao, a well-known Internet expert, said that AIGC in China is still in its infancy; a significant amount of work still needs to be completed before this can be commercially available on a large scale. Currently, the potential of this industry remains uncertain.

3. Opportunities and difficulties of digital publishing for the elderly

3.1. New opportunities: support policy promulgation and market demand to generate

At the end of the 20th century, many world-renowned publishing enterprises have begun to develop digital publishing technology and apply it to various publishing fields. The concept of digital publishing was officially used in China in 2005. In July 2013, the relevant state departments decided to support the procurement of software systems needed by traditional publishing enterprises for their digital transformation and upgrading. With the computing and storage capabilities of cloud computing, different types of digital publishing services are available for publishers. With the continuous increase in the elderly population, the market potential of digital publishing for the elderly is also growing, and its development is also facing many difficulties.

Compared with most other academic fields, the interruption and disintermediation of the digital age have been developing very slowly. In this environment, the multi-dimensional thinking of digital publishing is put forward, thus realizing the scientific research agenda of artificial intelligence from "single" to "comprehensive" perception. China has progressively introduced policies and laws related to its cultural industry since 2009. In order to conform to the development trend of the times, China's publishing industry is also discussing the group's digital transformation, and the traditional publishing industry is developing towards intelligence and digital transformation.

3.2 Digital exclusion: The acceptance of the elderly needs to be improved

Compared with many emerging reading forms in the digital age, the acceptance and utilization rate of digital publications by the elderly is generally low, mainly because the elderly are often rich in experience, accustomed to traditional reading methods, and have a sense of exclusion in the face of the new era and technological changes, such as pop-up advertisements and traffic reminders during digital reading, which will reduce the trust of the elderly in the network.

Currently, the audience of digital publishing products in China is still concentrated in young people who can consume online. The scale of the digital publishing market for the elderly is still relatively small. Many elderly users are unfamiliar with digital reading technology, and the operation of many electronic devices is also complex, limiting the development speed of digital publishing.

3.3 industry dilemma: the digital publishing industry for the elderly is not yet mature

Although China began to pay attention to the development of the digital publishing industry for the elderly in recent years and has given necessary support at the policy level, relevant enterprises and institutions are also actively promoting the research, development, and application of related technologies. However, in terms of the quantity and scale of digital reading, there is an imbalance between the supply and demand of digital reading resources for the elderly and the reading needs of the majority of elderly readers; products that meet the reading habits and needs of the elderly are in short supply. Moreover, most digital reading services pay little attention to the reading habits and thinking modes of the elderly, ignoring the media demands of digital reading for the elderly, which significantly increases the difficulty of social life participation of the elderly.

4. The influence of AIGC technology on the publishing industry for the elderly

4.1. To expand the scope of knowledge dissemination

Using AIGC technology to generate rich knowledge content can cover the information needs of various fields and also help the elderly publishing industry to seize the highland of information development faster so that the company can generate excellent brand attention and word-of-mouth effect in the community. The progress of AIGC technology has prompted more and more elderly people to enjoy the convenience of life brought by mobile Internet products and services. Since 2021, China's mobile Internet and smartphones have remarkably adapted to aging. The elderly have gradually become accustomed to obtaining, reading, and sharing information through mobile Internet and mobile phones. With the integrated development of science, technology, and culture, the scope of knowledge dissemination has expanded, thus bringing good opportunities for widespread science propaganda knowledge.

A few days ago, the first mobile internet product in China, which provides audio content services for the elderly, was launched. The "Famous Doctors Say" health science column launched by this App has a theme that fits the reality of the elderly. While ensuring scientific and authoritative content, it adopts easy-to-understand language to popularize professional knowledge and simplify complex problems so that the elderly can understand and apply what they have

learned. Compared with the traditional publishing industry, AIGC technology has broken the original geographical and regional limitations and significantly improved the efficiency of knowledge dissemination.

4.2. To promote innovation in business formats

Based on AIGC technology, advertising placement, commodity delivery, and e-commerce can open new business opportunities for the elderly publishing industry. This can expand income channels and play a critical role in improving marketing strategy and product value. Qingdao Publishing Group's city media and Himalayan jointly develop Internet radio stations to open up the audiobook market; Zhongnan Media, a subsidiary of Hunan Publishing Media Group, locates the elderly group, constructs the whole industrial chain from products to services, and provides one-stop services for related industry development from products to users. The expansion of the industrial chain not only meets the diversified needs of the elderly but also provides companionship for the elderly, improves their social value, and is conducive to promoting the new trend of digital reading for the elderly.

4.3. Optimize business processes

With the continuous development of artificial intelligence, AIGC technology provides more practical help for the elderly publishing industry in increasing traffic, exploring business opportunities, and improving production efficiency. The publishing house should actively respond to the risks encountered in the project implementation process. In addition to doing an excellent job in the pre-project investigation, feasibility demonstration, implementation plan, and phased evaluation, it is necessary to standardize business processes and effectively prevent and control risks through system construction and internal control management. Realize the professional promotion of the selected field, strengthen the optimization means in internal management, business process, data mining, and resource integration, and ultimately improve competitiveness in terms of quality, efficiency, and responsiveness.

They aim at the problems of unclear intellectual property rights, unclear ownership, and immature mechanism of digital products. It would be beneficial to seek the assistance of experts and legal advisors to properly organize and clarify intellectual property rights and establish standardized contracts. At the same time, establish a system of rules and regulations, clarify the rules and standards of product design and development, content production, and audit online, and prevent and control risks.

5. The development strategy of publishing integration for the elderly driven by AIGC

With the continuous development of artificial intelligence technology, AIGC technology has become increasingly prevalent in publishing for the elderly. By rapidly generating large amounts of high-quality content, it allows for the dissemination of knowledge and improves the business process of elderly publishing. This expansion of knowledge is extremely valuable for the elderly community. In order for AIGC to effectively drive the benign development of the publishing industry for the elderly, it is necessary to:

5.1. Adhering to the concept of integrated development of innovative management

In order to realize the sustainability of digital inclusion for the elderly, the government should give full play to its overall planning role, coordinate the participation of all sectors of society and support the market development of digital reading for the elderly. Relying on the interactive and fast communication of mass media, multi-level publicity will be carried out to eliminate the psychological barrier of the elderly group to digital reading and call on all sectors of society to focus on the digital reading problem of the elderly. In order to continuously improve the digital service experience of the elderly, various public libraries have been launched in various places; we should also pay attention to the digital development and protection of the resources of the old group and focus on embedding information technology into the life scenes of the elderly, especially on convenience and intelligence, so that the elderly can enjoy convenient life services through information technology.

5.2. Reconstruction and Exploration of Digital Publishing Format in an All-round Way

In recent years, intelligent editing has "shocked into people's field of vision" from the early stage. Under the intelligence background, the basic principle of publishing format reconstruction is to activate the relationship between production and consumption and explore emerging service models with content as the carrier and big data as the support. Through AI, the publishing industry will be upgraded from the tool layer of content production to the middle layer of platform operation, realizing the digital and platform transformation and upgrading of the publishing industry; The publishing industry will have the knowledge service from automation to personalized customization, and realize the intelligent production of the publishing industry; In addition, the publishing industry will trade from online trading of book products to intellectual property, copyright, and cultural IP to realize digitalization and industrialization of the publishing industry; Through AI, the publishing industry will have a new digital image, from virtual anchor to physical anchor, and realize the digital intelligent transformation of the publishing industry.

AIGC technology can quickly generate a large number of high-quality community news, life services, and medical and health knowledge, and the government should also undertake the corresponding social public service functions, promote resource integration, and help the elderly to obtain more benefits through existing social organizations and social security.

5.3. Establish the sense of hardship of AI wave

While ChatGPT is effectively engaged in the production of digital content, there has also been an "ethical shift" in the publishing subject: artificial intelligence has shaken the dominant position of people in the publishing process, which has had a significant impact on the original working methods and positioning of traditional publishing and digital publishing. Publishing for the elderly involves many fields, such as pension, health, medical care, culture, etc. In order to better meet the information needs of the elderly, the publishing industry for the elderly can get specific measures in the above aspects by using AIGC technology, which should be as follows:

5.3.1. Establish a network security system

The elderly must actively exert their subjective initiative to

bridge the digital divide and consciously train their digital skills. The publishing industry can use automatic text generation based on AIGC technology, which can enhance the flexibility and driving force of advertising marketing strategy for the elderly publishing industry and strengthen business realization. At the same time, the government needs to speed up the revision of relevant laws and regulations and departmental rules and regulations to protect the legitimate rights and interests of the elderly in using the Internet and strengthen the protection of the legitimate rights and interests of the elderly. On the technical level, we should focus on strengthening scientific and technological innovation and maintaining network security, cultivating new formats, and correctly guiding the elderly to contact the Internet.

5.3.2. Optimize the publishing technology business

The production process and business processes of the aged publishing industry are incredibly complicated. By improving the efficiency and accuracy of text information processing and shortening the time of traditional content writing, AIGC technology has shown remarkable advantages in predicting risks in advance and influencing the transformation of business models. Construct an intelligent, creative mode of "man-machine" cooperation. The digital publishing industry should learn from each other's strong points in collaborative creation and combine the efficient processing of artificial intelligence with the flexibility of human intelligence. At the same time, corresponding regulations should be established in the intelligent creation mode to prevent ethical problems such as copyright disputes and copyright use risks in collaborative creation. In order to clarify the attribution of the generated content, the publishing industry still needs to cultivate professional compound high-quality talents who know both artificial intelligence technology and traditional publishing knowledge and recombine "smart products" according to certain logic to solve the problems of homogenization of publishing products and differentiation of publishing marketing.

6. Funding

This study discusses digital publishing for the elderly driven by AIGC. It expounds on the development and reform of AIGC technology, the opportunities and difficulties of the publishing industry for the elderly, the realistic influence of AIGC on publishing for the elderly, and the strategies of AIGC driving the publishing for the elderly. It provides some new ideas and methods for producing and publishing digital publications for the elderly. It can provide a reference for research in the field of digital publishing. In addition, this study provides references and helps improve the digital reading literacy of the elderly and the applicability of digital publications and helps better to meet the needs and interests of the elderly.

AIGC-driven digital publishing for the elderly has become a topic of great concern. Through research, we can find that improving the digital reading experience of the elderly requires technological innovation and convenience improvement, and continuous improvement of user experience and service quality. Therefore, in future research, we should continue to pay attention to the development trend and user needs of digital publishing for the elderly and combine with AIGC technology to continuously innovate and improve the applications and services of digital publishing for the elderly to provide better digital reading experience for

the elderly and meet their digital reading needs.

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