

Application of Big Data Publishing in Children's Book Topic Selection and Planning: Postprint Edition

Authors: Xu Jing

Date: 2023-10-08T00:00:00+00:00

Abstract

With the rapid development of new media technologies, big data publishing has achieved deep integration with publishing operations. Consequently, traditional publishing models can no longer adequately meet the developmental demands of modern book publishing under such technological contexts. This analysis primarily conducts a detailed examination and exposition of the specific applications of big data publishing technology in children's book topic planning, and through concrete examples of actual topic planning cases, elucidates the significant value of children's book topic planning within the big data publishing paradigm.

Full Text

The Application of Big Data Publishing in Children's Book Topic Planning

Author: Xu Jing

Institution: Henan Science and Technology Press Co., Ltd., Zhengzhou, Henan 450016

Abstract

With the rapid development of new media technologies, big data publishing has achieved deep integration with publishing operations. In this technological context, traditional publishing models can no longer fully meet the demands of modern book publishing. This paper provides a detailed analysis and exposition of the specific applications of big data publishing technology in children's book topic planning, using practical examples to clarify the significant value of the big data publishing model for children's book topic planning.

Keywords: new media technology; big data publishing; children' s books; digital reading resources; information era

Introduction

Big data represents a novel conceptual framework that has emerged alongside advances in information technology, characterized by exceptional insight, discovery capability, and process optimization potential, as well as features of high growth rate and diverse information assets. As society has entered the information age, data scale has expanded rapidly, placing increasing pressure on traditional information management systems and highlighting their limitations. Consequently, a “big data” processing model has become necessary. The publishing sector has paid particular attention to this technology in recent years. Although CNKI (Tongfang Knowledge Network Technology Co., Ltd.) has proposed the concept of “big data” publishing, a complete theoretical system has yet to be formed. In China, the children' s book publishing market is substantial and has entered a critical stage of industry development. Relying solely on traditional topic planning approaches proves limiting and will severely impact future market expansion.

1. Big Data Publishing

Big data publishing represents a new model that integrates traditional publishing with digital publishing. This approach can effectively expand the utilization rate of traditional publishing resources and facilitate deep integration between industry development and big data technology, thereby driving industrial advancement. Big data is primarily characterized by large volume, diverse types, timeliness, and high value. In this publishing model, information can be efficiently stored, disseminated, and innovated. The model applies not only to the comprehensive integration of current information but also to the processing of historical data. Prior to the development of big data publishing, traditional and digital publishing processes lacked integration and predictive capability regarding resource allocation, resulting in significant resource waste and information loss. The widespread application of big data technology today has eliminated information silos and enabled the connection of disparate data sources to form a cohesive big data publishing model.

2. Specific Methods for Publishing Enterprises to Utilize Big Data

2.1 Web Text Mining The core of big data lies in its high data value. Social development has created increasingly close connections between industrial growth and information technology, generating massive amounts of information data, including substantial semi-structured and unstructured text information. Various industries require convenient tools to transform large volumes of data into comprehensible knowledge. Web text mining technology has emerged as a

big data solution to meet this need for information value extraction. As a crucial branch of data mining technology, text mining extracts knowledge content from text databases, enabling the aggregation of large text corpora and deep mining of analyzable, high-value information. Against the backdrop of rapid internet technology development, while Web applications have become widely 普及 in the publishing industry, they have also generated more diverse data types. Future development will require deeper Web text mining to extract more valuable information from massive datasets.

2.2 Utilizing Web Text Data The internet contains vast amounts of data information, including numerous reviews and comments even for bestsellers during publication. The application of Web text mining technology can effectively integrate and process publication reviews to extract valuable information. In practice, this primarily involves mining online book reviews and management data, enabling children's book publishers to organize and analyze various types of children's book review information while controlling costs. This approach also allows publishers to continuously understand user perspectives on children's books, enabling them to focus on market demands and select topics that suit reader interests. Furthermore, this publishing model facilitates comprehensive resource integration, cultivating sustainable competitive advantages while acquiring substantial knowledge resources.

Enterprises can leverage internet sales platforms to build consumer knowledge management systems, centrally integrating and analyzing comments and opinions from different customers, and transforming consumer reviews into corporate knowledge. This enables publishing institutions to make reasonable topic selection and publishing decisions based on actual user needs. Simultaneously, enterprises can manage customer knowledge by providing targeted solutions to user issues. Customer knowledge management systems also possess strong capabilities for synchronously responding to user demands, effectively enhancing children's book planning and printing based on actual user needs. Strengthening connections between publishing institutions and users ensures stronger decision-making capabilities in children's book publishing and promotes market development.

Mobile reading has developed rapidly in recent publishing contexts, with multimedia platforms such as WeChat and Weibo further driving societal mobile reading trends. In China's children's book topic selection process, dynamic topic selection must be integrated with actual social development conditions. For instance, editors should first combine online and offline dissemination and marketing methods for books, then utilize various social platforms for dynamic big data monitoring to clarify future publishing directions. Additionally, book design and printing quality must be enhanced to ensure children's books hold significant value. Reader trust in publishing institutions represents an effective pathway to improving book content and quality. Therefore, big data publishing technology can analyze standards used in the design and topic selection of cur-

rent bestsellers, clarifying future publishing objectives. Finally, topic selection approaches must be diversified. In today' s highly internet-permeated society, topic content should extend beyond traditional book content to incorporate various multimedia forms such as music and video, constructing a diversified platform for children' s book publishing that effectively integrates content dissemination and publishing.

3. Application to Children' s Book Topic Planning

3.1 Information Collection and Preprocessing Unlike fully structured data in traditional databases, review data' s most significant characteristic is its semi-structured nature. From the perspective of in-depth mining of review data, Web data information contains high-value thematic content within web pages. However, navigation bars, advertisements, and other elements unrelated to thematic content constitute noise that requires no mining. Therefore, web cleaning involves removing these noise elements to retain only theme-related information. In actual comment mining, web cleaning must first be implemented to purify text information from audio, video, and images within web pages while conducting deep analytical processing of text comment content.

During comment page downloading, focused crawler technology can be employed. Focused crawlers enable automatic webpage downloading based on set content parameters, selectively analyzing webpages and related links on the World Wide Web to effectively mine additional information data. Subsequently, detailed descriptions of Web page semantic structures must be created to design information files suitable for automated computer processing, enabling sustained Web information mining for future use.

3.2 Book Feature Extraction and Sentiment Analysis Competition in the children' s book publishing industry has intensified, placing increasing pressure on topic planning processes. Traditional children' s book publishing has been unable to effectively address issues of extensive and decentralized publishing, while outdated marketing models have gradually led to vulgarization and utilitarian trends that harm healthy industry development. To promote sustainable development, topic planning must leverage big data publishing technology advantages to scientifically plan future development directions and address potential problems. While meeting Chinese children' s basic needs for children' s books, publishers must fully utilize big data resources and ensure editors prioritize big data publishing in actual topic selection.

Big data publishing technology can effectively identify children' s interests in books, ensuring that distinct feature attributes gradually emerge from book reviews. However, different feature information requires in-depth analysis and processing. After clarifying every individual reader' s focus points, emotional tendencies can be identified based on attitudes reflected by various features. Sentiment word classification creates various types of sentiment feature vocabulary and numerous sentiment intensity vocabulary items. Deep analysis of these

sentiment vocabulary items can reveal consumers' emotional orientation toward children's books, which plays a decisive role in purchasing behavior. Only when children are interested in book content can sales be promoted. Consequently, future children's book topic selection can adopt targeted approaches based on user interest points, ensuring publishing from the user's perspective.

3.3 Internationalization of Children's Book Topic Selection With social development and progress, China's children's book publishing market has demonstrated internationalization trends. Unlike traditional copyright trading, this internationalization presents diversified publishing models. For example, 21st Century Publishing House invited Polish painters to Nanchang for collaborative publication of a series of children's books that received market acclaim from children. Japanese writers were also invited to jointly complete numerous children's book publications and designs. Such internationalized children's book topic selection represents innovative development that expands children's knowledge and greatly enriches book content, earning market popularity. Therefore, future children's book topic planning must broaden selection perspectives by actively drawing from excellent historical and ethnic cultures to enrich content. Internet development has promoted global economic and cultural communication, increasing people's attention to other cultures. Actively selecting international cultures and content in children's book topic planning effectively attracts children's interest, significantly enhances competitiveness among similar market products, and serves as an important method for promoting China's children's book industry development.

4. Future Development Prospects for Children's Book Topic Planning

Multimedia technology development requires publishers to integrate children's book design not only within their own industry domain but also with other media types. Under current information technology development trends, industries have formed diversified technological development patterns, necessitating three distinct transformations in children's book topic planning processes. First, professional development must be achieved in overall topic planning, encompassing not only content specialization but also ensuring specialized development in planning concepts and spirit. More professional publishers should utilize advanced big data technology to integrate and analyze various resources, launching higher-quality children's book products. Second, active innovation in children's book publishing must be pursued by connecting with foreign children's book publications to ensure alignment with international markets. This creates new development ideas for children's book content selection, providing more possibilities and enabling resource sharing to drive industry development. Gradually forming community alliances in China's children's book publishing field will enhance information sharing capabilities. When discovering and mining valuable children's book topic information, an innovative development synergy should be formed to jointly promote industry advancement. To continuously expand product sales and enhance business scale, future enterprise development must

strengthen cooperation and exchange across various fields, effectively enhancing inter-enterprise associations and forming an ecological internet development model among publishers, readers, and editors. This model's emergence signifies that China's children's book publishing industry is demonstrating scaled and standardized development trends. National modernization requires not only improved social infrastructure but also that all industries keep pace with modernization by effectively utilizing information technology to drive industrial reform and progress.

In conclusion, information technology profoundly influences numerous industries' development. For the children's book publishing industry, big data publishing technology can effectively provide reasonable suggestions for children's book topic planning. Only with such technological support can the entire book industry achieve better development and progress.

References

- [1] Wu Zilin. Research on the Application of Topic Selection Auxiliary Decision Systems Based on Mass Communication Theory[D]. Beijing: Beijing Institute of Graphic Communication, 2020.
- [2] Wu Xiaohong, Wang Danfei. Research on Current Thematic Publishing Topics in China[J]. Journal of Anhui Agricultural University (Social Sciences Edition), 2020(3): 116-122.
- [3] Zhang Congcong. Research on Thematic Publishing Evaluation Indicators for Publishing Enterprises[D]. Beijing: Beijing Institute of Graphic Communication, 2018.
- [4] Li Jianhong. Research on Thematic Publishing in China (2003–2016)[D]. Wuhan: Wuhan University, 2017.
- [5] Huo Wenchang. Research on Analysis and Evaluation of Publishing Project Topics[D]. Beijing: Beijing Institute of Technology, 2016.
- [6] Zhu Chifeng. Design and Implementation of ERP Topic Selection System Based on Digital Publishing[D]. Wuhan: Wuhan University of Technology, 2015.
- [7] Lu Yun. Research on “5·12” Book Topic Planning from the Perspective of Crisis Communication[D]. Chengdu: Southwest Jiaotong University, 2012.
- [8] Wu Wenfeng. Research on Current Status and Development Strategy of Sports Book Publishing in China[D]. Beijing: Beijing Sport University, 2007.
- [9] Kang Chao. Research on Topic Characteristics of Hebei Publishing Industry[D]. Baoding: Hebei University, 2006.
- [10] Xie Yang. Research on Fuzzy Comprehensive Evaluation Methods for Publishing House Topic Decision-Making[D]. Chengdu: University of Electronic Science and Technology of China, 2005.

Author Biography: Xu Jing (1984-), female, from Gushi, Henan, holds a master' s degree and works as an editor. Her research focuses on editing and publishing of popular science and children' s books.

Responsible Editor: Zhang Xiaojing

Note: Figure translations are in progress. See original paper for figures.

Source: ChinaXiv –Machine translation. Verify with original.