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## Digital Techniques and Post-Print Exploration in the Book Editing and Publishing Process

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### Abstract

[Purpose] Many stages of the book editing and publishing process are gradually transitioning from traditional methods to digital approaches, but the degree of digital development varies across different stages. This article primarily explores the digitalization of editing and quality inspection stages in the book editing and publishing process.

[Methods] Through practical application in actual work, some practical operational techniques are summarized; since applications and experience related to digitalization of quality inspection are relatively limited, this paper explores the models and specific processes of digital quality inspection, and proposes an implementation plan design.

[Results] Conducting digital exploration helps improve the work quality and efficiency of personnel involved in book editing and publishing, and further promotes the digital development of the book publishing industry.

[Conclusion] The transformation from traditional publishing to digital publishing represents a development trend in the book publishing industry; publishing houses should utilize continuously evolving information technology to promote the application of digitalization in the book editing and publishing process, thereby achieving high-quality and sustainable development.

### Full Text

#### Preamble

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## Abstract

**[Objective]** Many stages in the book editing and publishing process are gradually transitioning from traditional to digital methods, though the degree of digitalization varies across different stages. This article primarily explores the digitalization of editing and quality inspection stages in book editing and publishing. **[Methods]** Through practical application in daily work, we summarize several useful operational techniques. Since digital applications and experience in quality inspection are relatively limited, we explore digital quality inspection models and specific workflows, proposing an implementation plan. **[Results]** Digital exploration helps improve the work quality and efficiency of personnel involved in book editing and publishing, further promoting digital development in the publishing industry. **[Conclusion]** The transition from traditional to digital publishing represents a development trend in the book publishing industry. Publishers must leverage continuously evolving information technology to promote digital applications throughout the book editing and publishing process, thereby achieving high-quality, sustainable development.

**Keywords:** book publishing; editing; quality inspection; digital techniques; digital exploration

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With the continuous development of science, technology, and computer technology, and the increasing popularity of the Internet, information technology applications are becoming more frequent across all industries. The publishing industry is no exception, as traditional book publishing has been significantly impacted and is gradually implementing digital transformation, accelerating its digitalization process. To achieve better development, publishers must actively engage in practice and exploration, introduce digital publishing technologies, and cultivate digital editing and publishing professionals on the basis of changing traditional concepts. This will lead editing and publishing work toward digitalization, drive their own digital transformation, and form unique industry advantages [1-3].

The general process of book editing and publishing includes multiple stages, such as topic selection, editing, design and layout, proofreading, pre-press quality inspection, printing and binding, and marketing and distribution [4]. Among these, some stages have achieved a certain degree of digitalization, while others require further exploration to ensure the long-term stable development of the book publishing industry. Due to the extensive content involved in each stage of the book editing and publishing process, this article cannot cover everything and

will focus only on introducing the digitalization of editing and quality inspection.

## 1. Digital Techniques for Editing

For the editing stage in book editing and publishing, the following techniques are particularly practical.

### 1.1 Word Software

The vast majority of manuscripts received by publishers are in Word format. From manuscript receipt to editing and author revision, editors can record and archive relevant information on the computer for future reference when needed. This improves editors' work efficiency and enhances manuscript review quality.

Word is a commonly used word processing software with powerful built-in functions. For example, using the "Track Changes" function, all edits made by editors leave clear, distinguishable, and traceable marks. Mastering certain Word operation techniques can make editors' work much more efficient.

**1.1.1 Switching Between Superscript and Normal Format** Using the shortcut key, first select the content that needs to be changed to superscript or changed back to normal format, then press the "Shift+Ctrl+= " key combination [8].

**1.1.2 Uniformly Deleting Links** Sometimes URLs or key terms in manuscripts contain hyperlinks, which affect the opening and running speed of the document. Using the shortcut key, first press "Ctrl+A" to select all content, then press "Shift+Ctrl+F9" to delete all links in the manuscript uniformly.

**1.1.3 Auto-Save** Click "File" → "Options" → "Save" and set the time interval in "Save AutoRecover information every." For science and engineering manuscripts containing many charts and formulas, which are prone to issues (such as crashes or unexpected closures) during editing, it is recommended to set a shorter interval, such as 5 minutes or even 3 minutes. This way, even if Word malfunctions, the loss will be minimal. For manuscripts consisting mainly of text, a longer interval can be set, such as 8 minutes or even 10 minutes. Depending on the specific manuscript or work requirements, you can check or uncheck the box for "Keep the last auto-saved version if I close without saving."

**1.1.4 Custom Groups** During manuscript review, editors frequently need to change fonts, font sizes, or case (under the "Home" tab), insert circled numbers or special characters (under the "Insert" tab), insert footnotes (under the "References" tab), etc. Switching between these tabs is cumbersome. By creating a new group, you can place commonly used commands in one group. Right-click on the "Ribbon" in Word and select "Customize the Ribbon" to open the "Word Options" dialog box. In the left panel, select the command you want to add

from “Choose commands from,” then click the “Add” button in the middle to add the command to your custom group on the right.

Note that due to computer screen limitations, if too many commands are added to a custom group at once, the icons will automatically shrink, making them difficult to use. Therefore, it is recommended to add commands commonly used for the specific manuscript being reviewed to the custom group based on actual needs.

**1.1.5 Comparing Documents** Generally, editors return manuscripts to authors for revision. Sometimes, for various reasons, authors do not use the “Track Changes” function when revising, resulting in a returned manuscript without revision marks. This makes it impossible for editors to know what has been changed. In such cases, click “Review” → “Compare” to open the “Compare Documents” dialog box. Select the manuscript before the author’s revision as the “Original document” and the manuscript after revision as the “Revised document,” then click “OK.” A comparison document will be generated, clearly showing all author modifications as revision marks.

**1.1.6 Splitting Documents** Sometimes manuscripts are too large and prone to problems, or time is tight and multiple review stages need to proceed simultaneously. In these cases, editors can use Word’s document splitting function. First, set the heading levels of the manuscript (generally up to three levels is sufficient; this can be viewed through the “Document Structure Map” ), then click “View” → “Outline View.” For clarity, you can select “Level 1” in the “Show Level” box to display only first-level headings, hiding other content. Click “Show Document,” select all first-level headings, click “Create” → “Close Outline View,” close and save the manuscript. At this point, multiple files (subdocuments) will appear in the folder where the manuscript (master document) is located, named after each first-level heading. Different people can edit each subdocument separately. After all work is completed, in the master document’s “Outline View,” click “Expand Subdocuments,” select “Level 1” in the “Show Level” box, select all first-level headings, and click “Show Document” → “Unlink” to obtain the complete edited manuscript.

Other commonly used functions such as unified find and replace, unified footnote format modification, setting heading styles and automatic table of contents generation, adding or adjusting page numbers are simple operations and will not be elaborated here.

## 1.2 Professional Proofreading Software

In practice, publishers can equip themselves with professional proofreading software such as Heima Proofreading [9] and Founder Proofreading. Before editing, editors can use this software to process manuscripts. This effectively avoids errors caused by human oversight and reduces editors’ workload, improving work efficiency.

Taking Founder Proofreading as an example, it has PDF and Word versions with multiple functions, including one-click proofreading, general checks (character check, sensitive content check, contextual duplicate check, logic check), special checks (knowledge check, reference format, batch duplicate check, format check), special processing (chart management, name sorting), and special features (pinyin annotation, image-to-table conversion, etc.). Its advantages include:

First, **speed**. For a manuscript of approximately 150,000 words, both PDF and Word versions take about 1 minute and 40 seconds, saving time and effort.

Second, **comprehensive scope**. It can proofread Chinese characters, foreign languages and translations, punctuation marks, charts, and other content. Founder Proofreading has multiple professional lexicons and uses different specialized lexicons for manuscripts from different fields. It can also check document logic, such as document outlines and numbering (including figure numbers, table numbers, formula numbers, etc.). If there are discontinuities or duplicates in headings or numbers, the proofreading results will be highlighted in red for easy identification.

Third, **high error detection rate**. Proofreading results in both Word and PDF versions distinguish different error types with different colors, such as sensitive errors, serious errors, general errors, and questionable errors. It accurately identifies irregular simplified characters, typos, incorrect Chinese idioms, etc. Users can customize proofreading settings, such as setting the “Sensitive word check strictness level” to “Lenient,” “Normal,” or “Strict,” or setting the “Duplicate check” to “\$ 15characters,” “30characters,” “50characters,” or “\$100 characters.”

Fourth, **timely updates**. Some laws, regulations, national standards, and industry standards are revised or updated periodically, and relevant institutions and organizations release new documents and reports. The software updates these materials promptly to support editing work.

Fifth, **support for lexicon expansion**. Founder Proofreading has a lexicon management function that allows editors to add entries and manage lexicons themselves, improving proofreading accuracy.

## 2. Digital Exploration of Quality Inspection

Currently, publisher quality inspection mainly includes pre-press quality inspection (before book publication) and post-publication quality inspection (after book publication). In both cases, submitted books are generally printed paper copies. In the current information age, with continuous development and advancement of computer technology, the transition from traditional to digital publishing represents a development trend in the book publishing industry. To achieve complete digitalization of the entire book editing and publishing workflow, publishers must explore digitalization of the quality inspection stage.

Changing the current quality inspection model to adopt an unfamiliar new digital quality inspection model requires quality inspectors to first accept it psychologically, then continuously accumulate experience in practice, identify problems, solve them, and ultimately form a relatively mature and complete digital quality inspection process.

## 2.1 Significance

First, building a digital quality inspection model can advance the digitalization of books and business processes, ensure book publishing quality, and improve the overall quality of quality inspection work.

Second, building a digital quality inspection model can achieve datafication and intelligence at the back end of quality inspection, providing support for book quality improvement and early-stage processes (such as topic selection).

Third, building a digital quality inspection model can break through time and space limitations, enable real-time online file transmission, provide convenience for remote work, help improve quality inspection efficiency, and save time and labor costs.

Fourth, as part of the digital publishing workflow, digital quality inspection can effectively connect with early-stage processes such as topic selection and editing, facilitating the establishment and improvement of the entire digital publishing system.

Fifth, establishing a database of book editing and quality inspection results helps produce high-quality books, enriches book varieties and formats, and promotes better development of the book publishing industry.

Sixth, building a digital quality inspection model helps solve some existing problems in current quality inspection work [10]. For example, there are increasing numbers of two-color and even four-color printed books. Compared with monochrome printing, these books have more lively layouts with highlighted key points, making them more attractive to readers and stimulating their interest in learning. However, submitted manuscripts are generally printed in black and white, creating blind spots in checking design elements in colors other than black. Digital quality inspection can effectively solve this problem.

How to expand digital quality inspection methods to make quality inspection work more convenient and operational? How to better connect editors with subsequent work to improve efficiency? These issues require further discussion and exploration.

## 2.2 Implementation Plan Design

First, clarify the requirements for digital book quality inspection and gradually establish and improve the digital quality inspection system. Specific requirements are as follows: (1) Submitted manuscripts must be in PDF format with

complete components, including cover, main text, and supplementary materials; (2) Quality inspectors must check a minimum of 100,000 words per book, use unified software and versions (such as Adobe Acrobat, PDF-Xchange Viewer, etc.) to ensure compatibility, use unified annotation methods with proofreading symbols to ensure clear layouts for easy reference, and follow standardized procedures (editors submit quality inspection requests, quality inspection departments assign tasks, inspectors accept tasks, and after completing inspections, generate and submit the “Book Editing and Quality Inspection Results Record Form” ); (3) Feedback channels for inspection results must be unobstructed, allowing editors to raise questions about inspection results through these channels.

Second, establish a database of book editing and quality inspection results [11]. After completing digital quality inspection, inspectors generate the “Book Editing and Quality Inspection Results Record Form,” which is archived uniformly or placed in a database for future query, retrieval, and analysis. This enables relevant personnel to understand the types and proportions of various errors, helping editors focus on specific issues during editing to reduce the probability of similar errors in the future and improve work quality and efficiency. It also provides guidance for early-stage processes such as topic selection. For example, non-standard professional terminology is a common type of error. Acquisition editors can instruct authors to pay special attention to this issue during manuscript solicitation and use the “Term Online” website of the China National Committee for Terms in Sciences and Technologies to determine which terms are standard and which are not, reducing errors at the source and improving manuscript quality.

Finally, rely on the technical support provided by ERP systems. Using ERP (Enterprise Resource Planning) systems as a support platform, connect all stages of the entire book editing and publishing workflow to the ERP system. In the ERP system, quality inspection workflows, timelines, inspectors, and results are clearly recorded, enabling intelligent management of digital quality inspection work. Meanwhile, using ERP system backend data combined with relevant data analysis software can help identify problems in the digital quality inspection system and propose reasonable solutions.

In the early stages of exploring digital quality inspection, the book format can primarily focus on the most commonly used PDF files. With accumulated experience and deeper work, book formats can be expanded to EPUB, DPUB, AR, etc.

### 3. Challenges and Solutions

#### 3.1 Human Factors

Although digital publishing technology has developed to a certain extent in the book editing and publishing process, a considerable portion of editing and publishing work has not widely applied it. The reason is that relevant personnel

lack correct understanding of digital publishing technology, remain confined to traditional editing and publishing workflows, are unwilling to change their mindsets, and have weak digital awareness, resulting in slow digital development of editing and publishing work [12].

To address this issue, we recommend:

First, relevant management personnel in publishing houses should strengthen their awareness of digital management, which is a strong guarantee for achieving digital development. In practice, managers can regularly participate in digital publishing technology and digital editing technology seminars to continuously enhance their understanding of digital technology and update their management concepts. Additionally, managers must continuously learn advanced digital editing and typesetting technologies to effectively supervise and manage their staff and create a good digital work and learning atmosphere together with them [13].

Second, relevant business personnel in book editing and publishing must recognize the importance of digitalization, accept it psychologically, and gradually develop digital publishing awareness. Only then can they shift from “passive” to “active” digitalization and achieve editing transformation in the digital age [14–15]. Furthermore, all parties—including editors, quality inspectors, and technical personnel—must communicate fully, actively participate in relevant training activities, learn digital knowledge, improve their skills, enhance work efficiency, and can refer to and learn from the digital professional techniques and concepts of other publishing units.

### 3.2 Resource Factors

In the book editing and publishing process, some publishing units have insufficient investment and cannot purchase advanced equipment and software, resulting in incomplete digital equipment and software that fails to meet expected quality and efficiency standards. Digital editing and publishing technology is not used reasonably and effectively, and editing and publishing efficiency cannot be improved. To address this issue, digitalization of the book editing and publishing workflow requires certain equipment and technical support. Publishers must expand their investment, actively introduce advanced digital editing and publishing equipment and software, and ensure that equipment performance, software stability, and compatibility meet work requirements. This ensures work quality and efficiency in practice and promotes the digitalization process of editing and publishing work. At the same time, publishers must also equip auxiliary devices such as printers and scanners and purchase commonly used databases.

In the current information age, the rapid and stable development of China’s book publishing industry cannot be separated from the extensive and in-depth application of digital publishing technology. Publishers must leverage continuously developing information technology to promote digital applications throughout

the book editing and publishing process, constantly identify and solve problems, optimize and improve digital editing and publishing work, and gradually enhance their core competitiveness. This will place them in an advantageous position in market competition and achieve high-quality, sustainable development.

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

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