

## A Preliminary Analysis of Issues and Solutions for QR Code Applications in Book Publishing: Postprint

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### Abstract

In recent years, QR code-integrated publications have witnessed rapid development and have been widely welcomed and embraced by readers. An increasing number of publishing institutions have joined the endeavor of producing QR code-integrated publications. Owing to its clear and straightforward presentation, convenient and intuitive usage, and capacity for rich and diverse content, QR code technology has emerged as a new savior for traditional publishing houses, earning the designation of “a bridge for the digitalization of traditional print media” . While the advantages of QR codes in book publishing are self-evident, certain issues also exist in their application. As publishing professionals, it is imperative to actively investigate these problems and proactively explore solutions to achieve optimal utilization.

### Full Text

#### Analysis of Problems and Countermeasures of QR Code Application in Book Publishing

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**Abstract:** In recent years, QR code-integrated publications have developed rapidly and gained widespread popularity among readers, with an increasing number of publishing houses joining this trend. Due to their clear presentation, convenient usage, and capacity to carry diverse content, QR codes have become a new savior for traditional publishing houses and are hailed as “the bridge for digitizing traditional print media.” While the advantages of QR codes in book publishing are self-evident, certain problems exist in their application. As publishing professionals, we should actively identify these issues and explore solutions to maximize their utility.

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## 1. Advantages of Using QR Codes in Publications

QR codes, as a new medium, are increasingly applied in book publishing. Publishing houses design and produce QR codes for images, audio, video, and other resources based on the knowledge structure and content characteristics of traditional print publications. Readers can simply scan these codes with their smartphones to access the embedded content. This practice greatly enriches the content of print books, making them “three-dimensional” and significantly enhancing the reading experience.

**1.1 Rich Sources and Diverse Types** The content sources for QR codes in books are extremely rich. Generally, materials are provided directly by authors, though publishers may also organize specialized personnel to create illustrations, recordings, or videos after thorough communication with authors based on the book’s content. The types of QR codes in books are varied, ranging from simple Word or PPT files to linked websites, exquisite images, or carefully produced audio and video content, thereby delivering rich experiences to readers.

**1.2 Enabling Cross-Media Reading and Expanding Reader Access** With the proliferation of electronic devices, e-books have gradually gained reader favor due to their convenience and richness. E-books, carried on electronic devices, contain substantial multimedia content related to the book that readers can access anytime and anywhere, creating an excellent reading experience. In contrast, traditional print books only offer monotonous “black text on white paper,” resulting in a relatively dull reading format and poor user experience. However, QR codes have changed this paradigm.

We can understand QR codes as follows: content that users want to access is placed on a webpage pointed to by a URL, which is then stored in a generated QR code. When readers scan the code with WeChat or other mobile apps, the app opens the corresponding webpage, displaying diverse and rich resources to users. In this application scenario, the QR code essentially serves as a gateway to the mobile internet. QR codes provide a service that connects print publications to multimedia pages, opening a “magic door” for all readers that leads to a colorful “fairy tale world.”

Traditional print books are static, with expression limited to text and images, providing readers with an offline learning model. Readers may not always grasp the core content while reading. With the addition of QR codes, the reading

model transforms into a combination of online and offline experiences. By scanning codes to watch videos, readers can better understand the authors and their content. The application of QR codes in books represents “mobile internet + books,” bringing us infinite possibilities.

A crucial function of QR codes in print publications is providing value-added services for readers. What readers see is no longer static “black text on white paper” but a colorful three-dimensional world of images and videos. For example, detailed explanatory videos from teachers can be embedded in supplementary education books; exquisite images or scenic views of cities and attractions can be included in travel books; and cooking process videos can be added to recipe books. While service forms are diverse, the ultimate goal of all value-added services is to serve readers, provide varied reading experiences, and maintain readers’ original passion for reading.

### **1.3 Real-Time Updating of Book Content and Errata Information**

Traditional books suffer from limitations such as poor timeliness, monotonous format, fixed content, and susceptibility to errors. However, QR codes effectively address these issues. First, traditional print publications have fixed and outdated content materials, but QR code technology enables real-time updates to supplement the latest materials. By adding content to QR codes, publishers can achieve deep continuation of certain book content, compensating for limitations in length and monotonous format. This real-time updating and expansion provides readers with a better reading experience.

Second, books are artworks full of regrets because no matter how much editorial work is done, zero errors cannot be guaranteed upon publication. Many errors are only discovered after publication and can only be corrected in reprints or new editions. QR codes now help publishers and editors solve this dilemma. When errors are discovered after publication, editors can use technology to place corrected content in QR codes, which readers can access by scanning. Moreover, this content can be updated in real time, not only compensating for the regrets of publishing houses and editors but also enabling book quality to approach perfection, allowing books to better serve readers.

## **2. Problems in Publication QR Codes**

Despite their unique advantages and convenience, QR codes in book publishing exhibit issues such as uneven content quality, difficult-to-quantify labor costs, questionable editing quality, and inadequate follow-up services as their application becomes more widespread.

**2.1 Uneven Content Quality** QR codes are an emerging phenomenon in recent years, and many publishing houses are treating them as an imperative project. However, many others are blindly following the trend, placing QR codes for the sake of having them, often without screening or processing the

content, using them merely as selling points and gimmicks. Content quality issues generally manifest in several ways.

First, some publishing houses follow the trend by placing QR codes without positioning them near relevant content or providing corresponding textual explanations, leaving readers confused. Some QR codes directly link to webpages or Word documents without selection or deep processing, lacking readability.

Second, some audio, video, and animation content linked by QR codes is outdated and obsolete, with no reference value, easily causing reader 反感 and leaving a negative impression of the entire book.

Third, some QR codes are either inappropriate in content or improperly placed, showing no relevance between the book content and the linked QR code material, wasting readers' time and energy.

Fourth, some QR codes contain excessive content requiring long viewing times, which may harm children's eyesight in juvenile books and cause parental dissatisfaction.

It is easy to imagine that such QR codes placed in books not only fail to enhance book content and promotion but are also meaningless to readers, wasting their valuable time.

**2.2 Unresolved Labor Cost Issues** Compared to traditional books, QR code usage adds necessary considerations for planning staff and editors, thereby increasing labor costs. However, as an emerging phenomenon, many publishing houses have not reasonably accounted for this workload. This manifests in several ways.

First, if a book requires QR codes, planning editors must consider the content and format for placement, production costs and processes, plan publication schedules in advance, and communicate fully with authors.

Second, during QR code content editing, editorial staff must not only check the correspondence between text and images but also examine QR code clarity, integrity, relevance to book content, and test scanning smoothness and operability. This places higher demands on already demanding editorial work and undoubtedly increases workload.

Third, as editorial staff's main income source is editing fees, many publishing houses do not count and convert QR code workload, which invisibly weakens editors' enthusiasm and directly affects QR code quality.

**2.3 Hidden Dangers in Editing Quality** Before publication, editors conduct three rounds of review and proofreading on manuscripts. With the addition of QR codes, how to implement "three reviews and three proofreadings" on their audio and video content and ensure editing quality has become a new problem.

First, some publishing houses only emphasize editing and proofreading of print publications while neglecting careful editing of text content linked by QR codes, resulting in numerous editing errors and inaccuracies that greatly affect reader experience.

Second, audio, video, and animation content may play unsmoothly, with slow or failed redirects and many mismatches and omissions. Poor user experience leads to loss of trust in QR code-integrated publications.

**2.4 Copyright Infringement Issues in QR Code Content** Some images, audio, or video in QR code content provided by authors are directly copied from the internet without screening. When editors fail to verify and identify such materials, copyright infringement issues easily arise. This is not only irresponsible to readers but also seriously affects the publisher's social image and economic benefits, creating significant future troubles.

**2.5 Difficulties in Ensuring Follow-Up Services** After book publication, many publishing houses consider their work complete, lacking subsequent QR code updates and maintenance. Problems such as untimely content updates, failure to replace errata information promptly, and inaccessible QR codes frequently occur. In supplementary education books, issues like inaccessible listening materials and test explanation QR codes create extremely poor user experiences, affecting reader trust in publishing houses.

### 3. Countermeasures

**3.1 Optimizing QR Code Content Quality** The significance of introducing QR codes into print publications lies in achieving an important transformation from print books to digital publishing. However, we must clearly recognize that QR codes are essentially just a technical means, not a decisive factor. What truly determines their effectiveness is the content and services that publishing houses deliver to readers using QR code technology. Optimizing QR code content quality can proceed from several aspects.

First, not all books are suitable for QR codes. Publishers must comprehensively review the book's type, content, and positioning to select appropriate content and placement for QR codes. The linked content must be screened and selected, and its format optimized—not simply placing a few pages of Word documents or a website link. Publishers should select appropriate QR codes based on book content, choose suitable formats and durations, and ensure quality, diversity, and appropriate content volume. The presentation format must conform to readers' habits while maintaining book design aesthetics.

Second, materials should be current and avoid outdated content. For example, QR code content in legal and regulatory books should select the latest materials; national standards cited in science and engineering books should be updated to the most recent versions; and examples should incorporate the latest trends

to fully reflect the timeliness of QR code content. When using QR codes to supplement and expand book content, publishers should strive for simplicity and practicality, providing readers with comprehensive, in-depth, and multi-angle information to enhance the value of traditional print publications.

Third, when placing QR codes in books, publishers must screen and process content, emphasizing close relevance, compatibility, and coordination with the book's knowledge structure rather than simple content superposition. They must eliminate "superficially compatible but fundamentally disconnected" phenomena. For instance, in supplementary education books, explanatory content can be made into videos and animations, allowing students to conveniently and intuitively watch teaching videos, experimental courses, and online self-tests, and download key points and difficulties to their phones. Travel books can include local customs, images, videos, and historical stories to enrich content and attract readers. Animation and picture books can be combined with animated cartoons to provide good audio-visual experiences.

**3.2 Resolving Labor Cost Issues** Publishing houses should conduct thorough market research and consult with other publishers, formulate reasonable regulations based on extensive solicitation of editorial opinions, implement reasonable personnel allocation, and utilize QR code advantages while safeguarding editorial staff rights.

First, reasonably calculate workload for planning editors and copy editors to mobilize their enthusiasm and ensure QR code content quality.

Second, allocate personnel reasonably. QR codes require substantial manpower and financial resources from market research and content placement to production processes. Publishing houses must allocate personnel reasonably, coordinate all links, and formulate reasonable institutional safeguards.

**3.3 Ensuring Editing Quality of QR Code Content** Although QR code content is not as 直观 as print books, it is included in editing quality management and affects the entire book's editing quality. Editing errors also mislead and trouble readers, so editing quality issues in QR code content must be addressed.

First, if QR code content consists of text or images, responsible editors can conduct simple review and 梳理 on electronic manuscripts, print all materials to attach to the manuscript, treat the editing process and quality requirements the same as main text, and calculate workload based on editing volume.

Second, audio, video, and animation content must also undergo three rounds of review and proofreading, checking for political issues, editing problems, copyright issues, ideological problems, etc. Editors must carefully watch videos and animations to proofread text portions and ensure editing quality of QR code content.

**3.4 Preventing Copyright Infringement in QR Code Content** To protect publishers' social and economic benefits, editors should strive to achieve two points in daily work: (1) Images, audio, or video in QR code content provided by authors must be verified and identified through author verification, data 查阅, and multiple sources to ensure no omissions. (2) For QR code content obtained through illustration, recording, or filming organized by the publisher, advance explanations and relevant safeguard systems should be established to ensure reliable content sources and prevent copyright infringement.

**3.5 Providing Good Follow-Up Services for QR Codes** QR codes can enhance books with their convenience and three-dimensionality, bringing rich audio-visual experiences to readers and benefits to publishing houses. While QR code content selection and production before publication are important, subsequent maintenance is also indispensable.

First, besides promptly addressing reader feedback, publishers should regularly scan and check QR code content in books, maintain problematic QR codes in a timely manner, update outdated materials, and replace inappropriate content to enhance reader experience.

Second, strictly control information update procedures. For published books requiring QR code link updates, the three-review and three-proofreading process must be followed to ensure qualified content and editing quality. Updates without review and approval are prohibited, update frequency should be appropriately controlled, update times should be marked, and records of all updates should be kept for reference.

In conclusion, although QR code application in book publishing is already widespread, its development remains in an exploratory stage, and enormous potential exists for organic integration of QR codes with book content. The book market is always content-driven, with technology and service serving as auxiliary means. How to effectively promote the digital transformation of traditional book publications, perfectly combine QR codes with book publishing content, and better enhance reader experience still requires continued efforts and cooperation from the book publishing industry and related industries.

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