

# Analysis of Current Status and Optimization Recommendations for New Media Services in University Libraries: A Case Study of Hebei University of Technology Library (Postprint)

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## Abstract

**[Purpose]** The rapid development of new media technologies brings new opportunities and challenges to innovation and services in university libraries. By examining the characteristics of new media, this study analyzes the current status of new media services in university libraries and proposes optimization recommendations.

**[Method]** Taking the library of Hebei University of Technology as a case study, this research employs questionnaire surveys using a combined online and offline approach to conduct investigations among readers.

**[Results]** University libraries face issues in new media service provision, including insufficient richness of content on new media platforms, inadequate effectiveness of platform-reader interaction, and a lack of effective integration among different new media platforms.

**[Conclusion]** This article proposes optimizing new media services in university libraries through three aspects: enriching platform types, enhancing the effectiveness of platform interaction, and establishing an inter-university sharing mechanism for new media platforms.

## Full Text

### Preamble

#### ChinaXiv Cooperative Journal

#### Analysis and Optimization Suggestions for New Media Services in University Libraries: A Case Study of Hebei University of Technology Library

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## Abstract

**Purpose:** The rapid development of new media technologies presents both opportunities and challenges for innovation and service delivery in university libraries. This study analyzes the current status of new media services in university libraries and proposes optimization suggestions based on the characteristics of new media. **Methodology:** Using Hebei University of Technology Library as a case study, this research employs a questionnaire survey conducted through both online and offline channels to investigate library users. **Results:** The findings reveal that university libraries face several issues in new media service provision, including the need for enhanced content richness on new media platforms, insufficient effectiveness in platform-user interaction, and a lack of effective integration among different new media channels. **Conclusion:** The article proposes optimizing university library new media services through three key approaches: diversifying platform types, improving the effectiveness of platform interaction, and establishing an inter-university new media platform sharing mechanism.

**Keywords:** new media technology; university library; new media service; new media platform; survey

## 1.1 Definition and Types of New Media

New media, distinct from traditional media, represents digital media forms supported by emerging technologies such as digital media technology, internet technology, and instant communication technology. It primarily encompasses social media, mobile client media, instant messaging tools, digital television, digital magazines, e-books, and other media formats [1]. Characterized by rapid information dissemination and updates, low cost, rich information content, interactivity, hypertext organization, digitization, and convenient retrieval capabilities, new media has experienced swift development [2]. As a product of social informatization, new media has broadened people's access to information channels and fundamentally transformed information dissemination patterns.

Currently, common new media platforms include social networking platforms (WeChat, Weibo, QQ, Tieba, etc.), short-video platforms (Douyin, Tencent, Kuaishou, etc.), self-media platforms (Toutiao, NetEase Account, Sohu Account, etc.), and Q&A platforms (Zhihu, Tianya Q&A, 360 Q&A, etc.).

## 1.2 Importance of New Media Services for University Libraries

With the rapid development of society, library users have increasingly demanded more information-based, intelligent, and personalized services from university

libraries. Simultaneously, the traditional model of library participation in institutional talent development requires timely updates to meet the diverse educational needs of modern universities. In the era of new media, university libraries can leverage these platforms to satisfy the fragmented, personalized reading needs and timely information acquisition demands of faculty and student users [3], while also optimizing the presentation of collection resources, guiding reading behaviors, innovating information services, and participating in campus talent cultivation models.

### 1.3 Research Status of University Library New Media Services

Recent domestic research on new media in university libraries has concentrated on three main areas:

- (1) **Talent cultivation models for different majors in the new media context.** Li Mingjia [4] investigated the current status of visual communication design talent cultivation in the new media era and proposed new directions for its training model. Deng Liyan [5] introduced innovative approaches for cultivating journalism talent in universities under new media conditions. Luo Xiaoyan [6] examined curriculum design and university-enterprise collaboration in advertising talent development to meet the demands of the new media age.
- (2) **Paths for university libraries to serve institutional talent cultivation from different perspectives and in various forms.** Wang Yali [7] analyzed the advantages, methods, and approaches of digital reading promotion in university libraries within the new media environment. Wen Ying [8] highlighted experiences and strategies for cultural inheritance and innovation in university libraries under new media conditions. Zhang Lingling [9] explored the challenges facing reference consultation services in the new media era and discussed innovative service models leveraging new media platforms.
- (3) **Strategic research on library new media services.** Song Ruyan [10] identified problems in public library reader services and proposed innovative strategies for reader services in the new media context. Tong Wenjun [11] elaborated on development countermeasures for new media in library services from macro and micro perspectives. Ye Chengxia [12] discussed specific pathways for promoting service transformation in university libraries in the new media era through three aspects: innovating service methods, enriching service resources, and strengthening user interaction.

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### 3. Survey Results Analysis

This survey was designed based on existing research findings [13] and relevant questionnaires from Wenjuanxing on “New Media Platform Services in University Libraries.” The questionnaire covered users’ subjective demand for new media platform services, functional development of these platforms, their involvement in student learning, and service content. A total of 400 questionnaires were distributed to library users through both online and offline channels, with 378 valid responses collected.

The survey respondents were predominantly first-year (49.66%) and second-year (37.64%) undergraduate students. Participation from third-year students, fourth-year students, and graduate students was relatively low due to commitments such as graduation projects and internships. While this may present some limitations, it does not significantly affect the overall reliability and validity of the survey.

#### 3.1.1 Enhanced User Recognition of New Media Platforms

As new media technologies have rapidly evolved, libraries have launched various services for users, continuously expanding their service offerings through new media platforms. To investigate user recognition of these services, the questionnaire included two questions such as “How did you come to follow the library’s new media platforms?” The survey results are presented in Table 1 .

The findings indicate that 54.24% of users actively follow the library’s new media platforms, while 23.73% follow them temporarily to meet specific needs. Based on the current research landscape, it is evident that relatively few domestic scholars have conducted survey-based research on the status quo of new media platform services in university libraries. Therefore, this study takes Hebei University of Technology Library as a case study to investigate the current state of new media platform services. Hebei University of Technology Library is equipped with intelligent facilities such as smart data screens, RFID library management systems, seat reservation systems, and self-service borrowing/returning systems. The library has continuously expanded its new media services, innovated its service philosophy, and demonstrated certain advantages in new media technology application, making it relatively representative among university libraries nationwide.

Through this investigation of new media platform service status, we can more scientifically and objectively grasp the current situation, identify existing problems, and determine future development directions for new media services in university libraries, thereby providing valuable references for domestic university libraries in their new media service endeavors.

### 3.1.2 Continuous Improvement of Platform Functions

To examine the functional development of new media platforms in university library services, the questionnaire included three questions such as “What functions do you think library new media platforms should fulfill?” The survey results are shown in Table 2 .

The survey reveals that libraries are continuously developing their new media platforms and enriching their content. Over 60% of users believe that library new media platforms currently fulfill multiple functions, including knowledge dissemination, reading activities, educational guidance, and academic information. Additionally, 52.54% of users find the platforms relatively easy to use, and 54.24% can relatively quickly locate their desired learning content on these platforms. These findings indicate that more than half of users perceive the platforms as convenient to use, with increasingly comprehensive and well-targeted content.

### 3.1.3 Increased Participation in Talent Cultivation

As an important institution in university education, the library plays a role in talent cultivation. To investigate the involvement of new media platforms in this process, the questionnaire included three questions such as “Do you think new media platforms have an impact on your learning and daily life?” The survey results are presented in Table 3 .

The survey found that 50.85% of users are relatively willing to use the library’s new media platforms for learning purposes. Furthermore, 36.44% of users believe that using these platforms has a significantly positive impact, enhancing their personal development, while 49.15% consider the platforms helpful for their learning and daily life. Regarding participation in new media platform operations, 52.54% of users reported involvement as part of student teams in partial operational work. The growing willingness of users to utilize new media platform services for learning and the benefits they derive from them demonstrate that libraries are increasingly leveraging new media platforms to participate in campus talent cultivation.

### 3.2.1 Need for Enhanced Content Richness

Although university library new media platforms have gradually improved through continuous development, several issues persist. In response to questions about which platforms users typically use to follow library updates and which aspects of content need strengthening, 88.98% of users selected WeChat Official Accounts, 30.5% chose the official website, while very few opted for other platforms such as Weibo or Douyin. When asked about areas needing improvement, 61.86% and 55.93% of users respectively indicated that libraries should increase original content and provide more diversified learning services. The content distribution across different platforms is uneven, with WeChat Official Accounts and the official website receiving significantly more attention

than Weibo, Douyin, and other platforms. Furthermore, the service content on these platforms remains relatively monotonous, with insufficient professional academic lecture content.

### **3.2.2 Insufficient Interaction Effectiveness**

Based on two survey questions regarding participation in online/offline activities organized through new media platforms and whether users have left messages and received responses or interactions, only 25.59% of users frequently participate in library activities via new media platforms, while 57.63% decide based on the specific activity.

Regarding message posting on new media platforms, 61.03% of users reported leaving messages infrequently and experiencing slow responses and untimely interactions. This indicates weak interactivity between new media platforms and users, with insufficiently targeted activities, resulting in inadequate interaction effectiveness.

### **3.2.3 Lack of Effective Integration Among New Media Platforms**

Through the question “How do you think libraries should better utilize new media platforms to deliver services?” it was found that while users demand more personalized learning content and richer multimedia presentation forms, 65.25% believe that integration between the university library’s new media platforms and those of other university libraries should be expanded. Additionally, 64.58% consider it necessary to establish information sharing with other university-level new media platforms. These findings indicate that over half of users perceive a lack of integration between library new media platforms and those of other universities, as well as an absence of effective information sharing mechanisms with other campus new media platforms.

## **4. Optimization Suggestions**

### **4.1 Diversify Platform Types to Build New Media Strongholds**

The primary user group of university libraries consists of faculty and students who are relatively young and intellectually active. Consequently, monotonous and outdated content struggles to attract user attention to new media platforms. Therefore, it is essential to develop a balanced portfolio of different new media platforms. Currently, the library’s WeChat Official Account is relatively mature, primarily used for announcements, collection searches, e-resource access, and seat reservations, and can serve as the core of new media platform services. Beyond this, libraries should vigorously develop other popular platforms among university students, such as Weibo, Douyin, and Bilibili. Platform development should be tailored to each platform’s characteristics, with personalized learning services and professionally targeted academic lectures added based on user needs. Libraries should create and publish diverse content types, increasing the

proportion of original content and producing engaging learning materials from the user perspective. For instance, short videos recommending library resources or sharing book reviews could be regularly posted on video-based platforms like Douyin and Bilibili to enhance the library's user-friendliness. Weibo could be utilized for live streaming events and lectures, with recorded replays uploaded to provide users with in-depth learning resources. Multiple new media platforms should form an interconnected network for multi-directional dissemination, enabling users to genuinely feel the benefits of new media platform services for their learning while allowing libraries to truly participate in campus talent cultivation through these channels.

#### **4.2 Strengthen Operations Team Building to Enhance Interaction Effectiveness**

The survey revealed that university library new media platforms suffer from insufficient interaction effectiveness with users, indicating deficiencies in platform operations and a lack of dedicated staff. Therefore, libraries must adopt a new media mindset, improve operational models, and formulate long-term plans. They should cultivate and reserve new media talent by selecting professionally qualified librarians as core members of the new media operations team, providing regular professional training to keep abreast of the latest new media technologies. Libraries should also proactively investigate new media services at other university libraries to learn from each other's strengths and weaknesses. Additionally, emphasis should be placed on guiding student organizations, recruiting outstanding students to join the new media operations team. These students can participate in operations from the user perspective, serve as a bridge for communication with other users, update platform content regularly, maintain account activity and user engagement, and respond to users promptly to enhance their interest in new media platforms.

#### **4.3 Collaborate to Establish Inter-University New Media Platform Sharing Mechanisms**

University libraries cannot operate new media platform services in isolation. While increasing user participation and enhancing interactive communication, they should strengthen collaboration with new media platforms of other university departments and schools, establishing a sharing mechanism for learning and services. This would enhance new media service participation in campus talent cultivation across the entire university and create information sharing platforms with libraries at other universities in the same region to further expand service scope. Furthermore, libraries should conduct timely surveys to listen to user feedback, regularly perform data mining to analyze user habits, and promptly adjust new media service methods and content to leverage the key characteristics of new media effectively. Through interactions between users and the library, among users themselves, and between the library and different schools, a "community culture" can gradually develop, fully integrating new media into

library services.

This study has conducted an in-depth analysis of the deficiencies in new media service provision among university libraries and proposed future optimization suggestions through survey research. University library new media services remain in a developmental stage, requiring continuous exploration of service models that suit user needs to solidify their role in university education and genuinely participate in talent cultivation.

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

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