

Postprint: Development Status and Strategic Exploration of New Media for Electronic and Telecommunication Technology Journals in Sichuan

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

Abstract

[Objective] To facilitate effective dissemination of journal information to target readership, establish immediate communication and feedback channels with users, and promote the long-term sustainable development of journals. [Methods] Conducting investigation and research using fact-based demonstration and statistical tables. [Results] Through analysis of the new media development status of 16 electronic and telecommunication technology journals in Sichuan, proposals are made to accelerate new media development through: building a professional new media team, reprocessing of journal content, and emphasizing journal positioning. Conclusion The pace of new media construction for electronic and telecommunication technology journals in Sichuan is slow, and there is an urgent need to strengthen new media construction.

Full Text

Preamble

Sichuan Electronic and Telecommunications Technology Journals: Current Status and Strategic Exploration of New Media Development

(Sichuan Communication and Information Technology Magazine Co., Ltd., Chengdu, Sichuan 610000)

Abstract

Objective: To facilitate effective delivery of journal information to target readers, establish immediate communication and feedback channels with users, and promote the long-term sustainable development of journals.

Method: Factual demonstration and statistical tables were employed for investigation and research.

Results: Through analysis of new media development across 16 electronic and telecommunications technology journals in Sichuan, proposals were made to accelerate new media development by building professional new media teams, reprocessing journal content, and emphasizing journal positioning.

Conclusion: The pace of new media construction for Sichuan's electronic and telecommunications technology journals is slow and requires urgent strengthening.

Keywords: electronic and telecommunications technology journals; website; Weibo; Douyin; journal positioning

CLC Number: G23

Document Code: A

Article ID: 1671-0134(2023)05-060-04

DOI: 10.19483/j.cnki.11-4653/n.2023.05.013

Citation Format: Jiang Yanqing. Current Status and Strategic Exploration of New Media Development for Sichuan Electronic and Telecommunications Technology Journals [J]. China Media Technology, 2023(05):

Introduction

New media for publishing refers to traditional print media that, through information technology or tools, integrates traditional journal content with digital platforms for distribution and promotion, thereby enhancing the influence of traditional media. This includes integrated promotion through WeChat official accounts, Weibo, short video platforms, and other channels. This study analyzes the current development status of Sichuan's radio electronics and telecommunications technology journals (hereinafter referred to as Sichuan electronic and telecommunications technology journals) on promotional platforms such as websites, WeChat official accounts, Weibo, Douyin, and Bilibili, with a particular focus on how these journals can develop short video promotional platforms.

1. Current Status of New Media Development

The development of new media for China's scientific journals remains in its early stages, with insufficient performance in terms of prioritization, construction scale, resource integration, and successful cases, still some distance from entering a fast development track and reconstructing industry standards [1]. Among Sichuan's media outlets, newspaper new media development leads the way. Sichuan Daily's all-media platform, based on media convergence trends, has identified a new-era all-media integration path, creating an emerging convergence model of "one team, one platform, three terminals, all-media integration," initiating a new media construction trend [2]. In contrast, new media development for Sichuan's journals is relatively slow and unsystematic, which is closely related to the inherent characteristics of journals. Journal units are

small in scale, journal content lacks strong timeliness, and their development is constrained by multiple factors including the support and prioritization of supervising and organizing institutions, as well as the capabilities of their editorial teams, resulting in uneven new media development.

2.1 Basic Situation of Sichuan Electronic and Telecommunications Technology Journals

According to data from the Sichuan Periodicals Association, there are currently 16 electronic and telecommunications technology journals in Sichuan. By investigating the construction of websites, WeChat official accounts, Weibo, Douyin, and Bilibili for these 16 journals, this study examines the new media construction status of Sichuan's electronic and telecommunications technology journals and proposes corresponding development strategies.

2.2.1 Website Construction Status

Among the 16 journals, *Information Industry Report* has ceased publication. *Information Security and Communication Privacy* has a Baidu-certified website that is currently inaccessible, though it can be entered through CNKI's official site, which shows the website is under construction. *Communication Technology* requires access through CNKI's search and submission portal. Two journals have not established their own websites. Therefore, 12 journals were available for effective investigation. All 12 rely on third-party companies for construction, operation, and maintenance, including Beijing Renhe Huizhi Information Technology Co., Ltd., CNKI, and Xi'an Sancai Electronic Technology Co., Ltd. All 12 websites have their own editorial systems, with 10 having Baidu certification (including one with an inaccessible website). Baidu-certified official websites display a blue "official" label next to search results to verify website authenticity.

2.2.2 Website Column Status

The primary purpose of journal websites is to facilitate manuscript submission and peer review. All 12 investigated journals have implemented review systems on their websites. Six journals use website-based submission while also maintaining office email addresses, while the remaining seven accept submissions through both website and email. The two journals without websites use email submission only. Overall, journal offices use both email and website systems, as website program configurations often make email more convenient for author communication and interaction.

Table 1 Survey of Main Columns on Journal Websites

Traditional graphic promotional platforms primarily emphasize website and official account construction, with Weibo receiving minimal attention. From a media convergence perspective, eight journals integrate their WeChat official

accounts with journal websites, achieving multi-point promotion that expands audience reach and enhances journal influence to some extent.

2.3 Operation of WeChat Official Accounts and Weibo

Eight journals place their WeChat official account QR codes on their official websites for integrated promotion. Nine journals have their own WeChat official accounts, including *Information Security and Communication Privacy*, while six have not established official accounts (see Table 2).

Among journals with official accounts, initial launches were concentrated between 2013-2017. The columns on these accounts are similar to website columns, primarily serving complementary promotional functions. In terms of original content publication, one journal has over 1,000 articles, while others have fewer than 100, or even fewer than 10. This is mainly due to prolonged periods of inactivity since account launch, resulting from either neglect by journal offices or uncertainty about appropriate content to publish. The sole journal with over 1,000 original articles focuses on promoting cutting-edge information, such as a February 22, 2023 article on “The Impact of ChatGPT on Network Security,” which capitalized on a trending topic to achieve naturally high readership. This journal is also the only one with 36 videos on its video channel, demonstrating significant effectiveness in official account construction.

Only three journals have launched Weibo accounts: *Electronic Components and Materials*, *Digital User*, and *Terahertz Science and Electronic Information Journal*. Their columns are limited to introducing basic journal information and publishing calls for papers, with almost no updates since launch. *Digital User*, launched in 2014, has posted only two Weibo entries. *Electronic Components and Materials*, launched in 2011, ceased updates in 2014 after posting 225 entries, with 647 followers and 511 followings. *Terahertz Science and Electronic Information Journal* posted 77 entries over five years, mostly links to published issues.

Table 2 Services Provided by WeChat Official Accounts

2.4 Status of Douyin, Bilibili, and Other Platforms

None of the investigated journals have opened accounts on Douyin, Bilibili, or similar video platforms.

3. Development Strategies

3.1 Accelerating Graphic Promotional Platform Construction

For journals without established websites, WeChat official accounts, or Weibo platforms, enhancing academic journal dissemination and influence requires actively learning from and cooperating with platforms that have large audiences, and vigorously promoting journal platform construction.

3.2 Journals Should Identify Their Positioning

Strengthening platform construction should be a priority for journals. With rapid development of information and communication technology, journal website construction plays an increasingly important role in establishing brand image and enhancing academic influence [3]. Through comprehensive investigation results, Tao Jing and Fu Shaolan concluded that new-era scientific journal websites should not be mere electronic versions of traditional print publications, but should be forward-looking, containing more information and services [4]. Yang Fengxia and Zhang Shuxin, after investigating domestic mathematics journal WeChat platforms, identified issues such as insufficiently rich and innovative menu settings and low push frequency, proposing measures to increase investment, strengthen content construction, and enhance interactivity to improve operational levels [5]. Liu Chunli, through research on seven editing and publishing journals with official accounts, suggested journals optimize WeChat platforms from five aspects: positioning, service, content, editing, and marketing [6].

3.2.1 Emphasizing Column Construction Among journals with websites and WeChat official accounts, basic website functions are sound, but website and official account columns are largely similar and require improvement in personalized design. All journals with official accounts have achieved timely column updates and optimized column layouts. Some journals require user binding for submission, which increases usage difficulty and could be optimized by directly linking to the website, thereby integrating official accounts with websites for combined promotion.

According to Weibo's Q4 and full-year 2022 financial reports, Weibo's monthly active users reached 586 million in Q4 2022 [7]. Given Weibo's resource optimization for the entertainment market, journal offices should establish their own presence on the platform. Among investigated journals, only three have Weibo accounts, all of which have ceased updating, making them non-representative. Using *China Laser* magazine as an example, its Weibo has 1,720 followers, 253 followings, and 2,376 reposts/comments/likes. Since its 2012 launch, it has continuously updated with content including conference notifications, editorial board awards, editor-recommended articles, lecture shares, and special features.

3.2.2 Timely Content Updates In addition to announcements, conference news, and current issue tables of contents that require timely updates, other website columns remain largely unchanged. Journals generally update current issue contents and covers promptly. As of the February 2023 investigation, *Electronic Components and Materials* (monthly) had updated its contents through December 2022, *Communication Technology* (monthly) through November 2022, and *Journal of Chengdu University of Information Technology* (bimonthly) through Issue 6, 2022. Timely column updates allow users to stay informed about journal developments.

Website updates are related to the construction teams. To update website content, journals often need to commission third-party developers, creating time lags that slow updates. To ensure timely content updates, journals must strengthen communication and collaboration with third-party website developers, or maintain websites independently to promptly monitor and address website conditions.

3.3 Providing Practical Services for Users

By examining various journals' column construction, journals can optimize columns and content to provide practical services for users.

3.3.1 Targeted Column Addition Website and WeChat official account development varies significantly among journals. For core journals or those previously included in core journal databases, their higher influence enables priority publication. Priority publication allows network pre-publishing of high-quality articles before print publication, addressing scheduling delays, retaining excellent authors, and timely disseminating cutting-edge industry information. Among the 12 journals, three offer priority publication: *Journal of University of Electronic Science and Technology of China*, *Laser Technology*, and *Electronic Components and Materials*.

For journals not yet offering priority publication, column construction can be optimized by adding sections such as publication ethics, which requires reviewers to follow certain rules to avoid risks such as leakage of authors' academic achievements. Official account columns should consider user experience and add content that users care about and need, primarily journal introductions and website links, creating an ideal communication platform with users and enhancing journal influence.

Eight of the 12 journals place WeChat QR codes on their websites for integrated promotion and traffic guidance. However, due to insufficient new media construction, even the three journals with Weibo accounts do not promote or guide users to their Weibo on their websites.

3.4 Construction of Douyin, Bilibili, and Other Platforms

None of the investigated journals have opened Douyin or Bilibili accounts. *Information Security and Communication Privacy* has 36 WeChat video channel entries, primarily forwarding latest industry reports and expert lectures. Analysis of *China Laser* magazine, which ranks high in CNKI's impact factor annual report, provides valuable experience. The magazine's Bilibili account has 23,000 followers and 201 videos. Its Douyin account posted 17 videos from March to April 2020, with one additional video in 2022, having 12 followings, 1,998 followers—exceeding its Weibo follower count. Though short video platforms have far fewer posts than traditional graphic platforms, their promotional impact is significantly greater.

According to the China Internet Network Information Center's (CNNIC) 51st Statistical Report on China's Internet Development, as of December 2022, China's internet users reached 1.067 billion, with an internet penetration rate of 75.6% [8]. Short video development potential is therefore enormous. Leveraging emerging short video social media and fully utilizing Chinese short video companies' leading advantages in overseas markets has become an important topic for strengthening international communication capacity building [9].

3.4.1 Content Reprocessing Promoting journal content through video requires secondary processing. First, target audiences must be identified based on journal positioning, roughly divided into professional technical personnel and general public interested in the industry. Content can include professional knowledge lectures for industry technicians' advanced learning, or basic knowledge popularization for general audiences to understand specialized wireless electronic and telecommunications technology.

According to audience characteristics, appropriate journal content should be selected for reprocessing. Based on short videos' characteristics of being short, fast, and engaging, content cannot be directly copied but must be streamlined or focus on key points for in-depth explanation before being produced into videos.

3.4.2 Building Professional Teams For graphic-oriented platforms like journal websites, WeChat official accounts, and Weibo, editorial departments can handle both traditional print publishing and platform integration. However, short video platforms differ from graphic platforms. Short videos require short duration, rich and interesting content, and high-quality footage. They demand content diversification, plain language, and refined, beautiful visual presentation. Traditional editorial teams cannot simultaneously specialize in short video promotion. A professional new media team is needed—one that understands new media operations, content planning, and marketing, while possessing specialized industry knowledge. This team should have the authority to decide which content to film, produce, and distribute. They must have professional and ethical standards required by the industry, unique insights into video production, and the ability to combine industry knowledge with real life for planning, filming, production, and publication [10].

Conclusion

Through analysis of new media construction among Sichuan's wireless electronic and telecommunications technology journals, this study proposes optimization measures including building professional teams and emphasizing column construction. In summary, new media construction for Sichuan's wireless electronic and telecommunications technology journals is progressing slowly or has stagnated, urgently requiring strengthened new media development.

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(Responsible Editor: Zhang Xiaojing)

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

Source: ChinaXiv –Machine translation. Verify with original.