Exploring the Role Transformation Path of Scientific Journal Editors in the New Media Era: Postprint

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Abstract

With the rapid development of network technology and information technology, China has entered the new media era. The convergence of journals with new media represents an important trend in the future development of scientific and technological journals, placing higher requirements on editors of these journals. At the current stage, there are still many problems in the execution of editorial work for scientific and technological journals, including inconsistent staff competency, a relative scarcity of new media concepts, and weak informatization, which collectively constrain the healthy development of these journals to a certain extent. This article elaborates on the role positioning of scientific and technological journals in the new media era, analyzes existing problems in current editorial work, discusses the advantages of transformation for editors of scientific and technological journals in the new media era, and explores transformation pathways, with a view to providing positive implications for enhancing the editorial level of scientific and technological journals.

Full Text

Research on the Transformation Path of Sci-Tech Journal Editors' Roles in the New Media Era

Abstract: With the rapid development of network and information technologies, China has entered the new media era. The integration of journals with new media represents a crucial trend for the future development of scientific and technological journals, placing higher demands on sci-tech journal editors. At present, numerous problems persist in editorial work, including uneven staff quality, a relative scarcity of new media concepts, and weak informatization, which collectively constrain the healthy development of sci-tech journals to some extent. This article elaborates on the role positioning of sci-tech journals in the

new media era, analyzes existing problems in current editorial work, discusses the advantages of editor transformation in the new media era, and explores transformation pathways, aiming to provide positive insights for enhancing the professional standards of sci-tech journal editors.

Keywords: new media era; sci-tech journals; editors; role transformation

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Since the beginning of the new century, driven by internet and information technologies, China' s new media industry has experienced rapid development, with increasing academic research on new media and growing attention from media scholars regarding its impact on their work. In practice, the emergence of new media has created both challenges and opportunities for traditional sci-tech journal publishing and distribution. With strong innovative capacity, traditional sci-tech journals can harness the dissemination advantages of new media platforms through organic integration, generating powerful momentum for their development. Faced with these changes, sci-tech journal editors must clarify their role positioning, promptly identify various problems in their work, leverage the advantages of new media platforms, achieve role transformation, and promote the smooth development of sci-tech journals.

1. Role Positioning of Sci-Tech Journal Editors in the New Media Era

In the new media context, sci-tech journal editors must fully utilize new media advantages, actively explore the application of various technologies in editing and publishing, innovate while adhering to tradition, fulfill their practical functions, and promote the integrated development of socialist culture, undertakings, politics, and economy.

1.1 Bridge Function

Editorial work primarily involves collecting, organizing, and disseminating information, preserving human spiritual culture in standardized formats and transmitting it to the broad masses. New media development has provided extensive foundations for disseminating new technologies and sciences. Sci-tech journal editors must capitalize on these conveniences to integrate and optimize information resources, promptly deliver cutting-edge academic information to audiences, build bridges between creators and readers, balance the supply-demand relationship between individual creation and social needs, foster a favorable atmosphere for scientific development, and advance China' s research undertakings.

1.2 Gatekeeping Function

Editorial work involves integrating, selecting, and confirming information resources, choosing high-quality works from vast amounts of information to transform them into social and cultural products that promote the formation and development of social culture. In terms of role positioning, sci-tech editors are constrained by social, economic, cultural, and political factors, requiring them to follow certain editorial policies in manuscript selection, editing, review, processing, and proofreading. This determines the "dual-directional" characteristic of editorial work in cultural functions. On one hand, editors must support cultural innovation and explore the necessity and inevitability of new technological development; on the other hand, cultural norms exhibit strong stability characteristics at specific social stages, requiring editors to work according to these norms. Therefore, sci-tech journal editors must strictly gatekeep works to ensure journal quality and fulfill their practical functions.

1.3 Catalytic and Guiding Function

The transformation of people' s ideological achievements requires material carriers. Sci-tech journals bear the attributes of social spiritual products and constitute part of the mass communication network in the new media era. New media represents a new communication paradigm that promotes cultural dissemination. While technology is a double-edged sword, so is new media—it not only enhances the immediacy and convenience of information dissemination but also brings adverse effects, such as increasingly complex information content that makes it difficult for users to distinguish truth from falsehood in massive information resources. Sci-tech journal editors defend format standards within the socialist cultural system while providing new cultural norms for the prosperity and development of socialist cultural undertakings, establishing correct concepts of thinking and behavior, and playing a catalytic and guiding role in cultural development.

1.4 Nurturing Function

Sci-tech journals possess strong social influence by nature and can cultivate large author groups under proper editorial guidance. Editorial work has a guiding function that, through subjective influence, fully mobilizes authors' enthusiasm and initiative, inherits traditional cultural knowledge while innovating, and cultivates relatively stable manuscript sources. Based on high-quality manuscripts, sci-tech journals can achieve greater influence, enhancing readers' interest and loyalty.

2. Problems in Current Editorial Work

2.1 Unclear Positioning and Insufficient Digitalization

As a medium and platform for scientific and technological exchange, sci-tech journals play a role in disseminating academic ideas. In the new media context, a typical challenge is how to adjust positioning and accelerate self-development. The media development landscape is transitioning from print to digital, with abundant network information resources necessitating the redefinition of sci-tech journal development. To enhance competitiveness, sci-tech journals should face competition based primarily on academic standards while clarifying their editorial concepts and establishing their positioning. Currently, sci-tech journals primarily utilize new media through website construction, digital journals, and clustered platform applications, with some participating in social media dissemination through Weibo accounts, enabling digital dissemination of some resources. However, the overall development situation remains concerning.

2.2 Uneven Information Content Quality

Under new media influence, the scope of network information resources has expanded, with obvious information overload phenomena. How to select valuable information from massive resources has become a challenge for audiences, often consuming excessive time and energy with unsatisfactory selection results. From the audience' s perspective, if technological development cannot provide greater convenience but instead becomes an obstacle to understanding the real world, massive information resources lose their significance. Audiences need more reliable information and the ability to adjust content to ensure information authenticity. High-level content produced by sci-tech journals is completed through professional academic platforms and extensive author groups, which means that from the traditional media "gatekeeper" perspective, content undergoes multi-layered "gatekeeping" before entering distribution channels. This somewhat weakens the practical role of sci-tech journal editors, affecting overall information quality and authority.

2.3 Staff Quality Needs Improvement

New media involves high scientific and technological content, with most content originating from users themselves, resulting in certain limitations in content and quality. Compared with traditional sci-tech journals, new media platforms have low entry barriers while providing "multimedia" communication platforms unavailable to traditional media. Although this enhances communication between audiences and disseminators to some extent, the low barriers negatively impact information dissemination, making it difficult for audiences to distinguish information authenticity. Sci-tech journal editors must possess not only strong professional knowledge but also play a guiding role in science and technology communication, providing audiences with high-value, easily accessible scientific and technological information. This involves not simply electronicizing print

content but focusing on digital content development. In the new media context, if editors lack professional literacy and network knowledge, they cannot effectively fulfill their bridging function, increasing work difficulty and requiring focused solutions.

2.4 Lack of Effective Career Incentive Systems

New media development has significantly impacted sci-tech journals, though its effect on mechanisms remains less obvious. As a traditional industry, sci-tech journal publishers have not substantially changed their management models, which no longer meet current social development needs. Many sci-tech journals perceive their development as heavily constrained, lacking work enthusiasm and initiative. While new media provides broad development space for media dissemination, emerging online media focus primarily on management innovation, neglecting technological innovation development. By adopting new management models and methods, they enhance work levels and directly link editors' personal income to workload through performance metrics, encouraging individual innovation and vitality. Under traditional work models, sci-tech journal editors receive reliable security but exhibit low enthusiasm for work innovation, with some even losing confidence and considering job-hopping, which proves detrimental to overall industry development. Furthermore, during the institutional reform of sci-tech journal publishers, editors' practical interests cannot be effectively guaranteed, creating many concerns. Against this backdrop, many young people are unwilling to enter sci-tech journal editing, causing talent drain, lack of vitality and motivation, and negatively impacting long-term development.

3. Advantages of Editor Transformation in the New Media Era

New media platforms provide convenient conditions for sci-tech journal editor transformation, mainly manifested in three aspects. First, **quantified preservation and personalized customization**. In traditional print media, information resources were transmitted to audiences in paper form, constraining content. New media development breaks spatial limitations in print media, enabling unrestricted information preservation and organic integration of various information types, including science and life. Moreover, new media encompasses a vast breadth of information, allowing audiences to choose personalized information services according to their preferences, demonstrating information targeting and meeting basic needs for learning, living, and development. During transformation, sci-tech journal editors should reflect personalized services, save time for audiences, and demonstrate the relevance and effectiveness of sci-tech journals.

Second, **expanded audience and enhanced timeliness**. With the popularization of smart mobile devices, people increasingly use phones and tablets to receive and search for information, simultaneously publishing information on-

line, which has changed media information dissemination patterns and blurred the distinction between communication subjects and objects. This situation provides extensive foundations for the dissemination and utilization of sci-tech journal information. Leveraging new media advantages, sci-tech journal content can be instantly transmitted to audiences, greatly enhancing information timeliness and better reflecting the practical value of sci-tech journals.

Third, **increased manifestation forms**. Print media primarily uses text with some inserted images, while new media platforms enable information dissemination through text, images, video, audio, and other forms, enriching audience sensory experiences. Sci-tech journals are highly specialized, and traditional print media dissemination poses certain comprehension difficulties. New media development provides audiences with diversified, three-dimensional information resources that facilitate better understanding and acceptance.

4. Transformation Paths for Sci-Tech Journal Editors in the New Media Era

The development of sci-tech journals is based on innovation, and the new media era provides an important foundation for the transformation and development of sci-tech journal editors. In today' s rapidly changing media landscape, the transformation of sci-tech journal editors has become an inevitable trend.

4.1 Update Work Concepts and Enhance Editor Literacy

In the new media context, the work content of sci-tech journal editors is evolving from traditional text editing and processing to digital editing. This places new demands on editors, requiring them to promptly update work concepts, establish digital editing awareness, and apply various technological advantages of new media to sci-tech journal editing work. As direct participants in digital publishing innovation, sci-tech journal editors should align with social development trends and fully utilize new media in manuscript collection, review, proofreading, and layout to provide technical advantages for journal transformation and development. Furthermore, editors should leverage big data advantages for scientific analysis, actively using big data for data quantification and information processing to demonstrate digital technology benefits. As times continuously develop and progress, audience aesthetic literacy continuously improves. In summary, the new media era presents a trend of integrated development among multiple technologies, and the development forms of sci-tech journals become more diversified under this background. New media has changed the original state of sci-tech journals while also revolutionizing editors' cognitive scope. They must not only provide publication products but also deliver services, shifting from cultural product processing to meeting audience personalized needs. Leveraging new media advantages for information dissemination has gradually become the development trend of the publishing industry in the current stage. With increasingly fierce market competition, sci-tech journal editors must consistently

adhere to people-centered work concepts, clearly recognize their positioning, establish brand concepts, remain true to their original aspirations, and provide high-quality scientific and technological services for audiences. Simultaneously, sci-tech journals should conform to the trend of the times, grasp new media advantages, optimize distribution channels, enhance digital construction, strengthen editors' comprehensive capabilities, emphasize innovation in both content and form, demonstrate their reliability and credibility, continuously innovate and develop in the globalized and market-oriented publishing industry, and ensure the virtuous cycle of sci-tech journals.

Sci-tech journal editors must advance with the times, continuously strengthen their core competencies, and provide high-quality scientific and technological information for audiences. In the new era context, editors should broaden their horizons, uphold scientific spirit, respect objective facts, embrace inclusiveness, and sustain innovation, enhancing their comprehensive capabilities from three dimensions: scientific spirit, professional literacy, and business skills. On one hand, sci-tech journal editing work must be scientifically rigorous, pursuing accuracy and completeness of information sources, and fulfilling responsibilities for disseminating scientific knowledge and promoting scientific transformation. On the other hand, editors must possess high professional literacy, follow cutting-edge achievements in their fields, understand the latest disciplinary dynamics and future development trends, and produce more exquisite content in terms of quality, taste, standards, and layout to enhance overall journal effectiveness. Additionally, in terms of business capabilities, sci-tech journal editors must master proficient operational skills. They are not only journal editors but should also possess market awareness, manage journal operations and development well, create high-quality journals, increase circulation and influence, and achieve both economic and social value for sci-tech journals.

4.2 Innovate Journal Content and Expand Diverse Publishing Models

With diversified media development and varied information reception methods, reading patterns have significantly changed from traditional print reading to electronic reading, diverting traditional sci-tech journal readers and weakening their influence. Sci-tech journal editors must fully recognize these changes in reading patterns, utilize big data analytical capabilities, promptly identify factors constraining journal development, and grasp overall development trends. In terms of editorial content, sci-tech journals should become more diversified, incorporating not only traditional text, images, and tables but also appropriately integrating video, audio, and dynamic images. In their work, sci-tech journal editors should leverage big data technology advantages, actively explore diversified publishing methods, adapt to the basic requirements of sci-tech journal development in the new media era, and meet diverse audience needs.

4.3 Create Featured Columns and Enhance Core Competitiveness

Currently, many sci-tech journals suffer from insufficient column characteristics, obvious homogenization, and numerous problems in their setup rationales, affecting their practical functions. Many editors have recognized these issues and invested more funds to enhance brand effects, but overall results remain unsatisfactory. New media development provides opportunities for developing column characteristics. Editorial staff should leverage resource integration and information collection and analysis capabilities to gather author information related to featured columns, analyze their research fields and academic backgrounds, build communication bridges, gradually form rigorous and professionally competent column teams, and promptly push the latest scientific and technological dynamics, research hotspots, and industry development trends to audiences, thereby enhancing their dependence on and loyalty to sci-tech journals.

4.4 Conduct Accurate Positioning and Achieve Comprehensive Digitalization

As digitalization represents the development trend of sci-tech journals, editorial staff must achieve accurate positioning and enhance the degree of digitalization. Sci-tech journals are highly specialized with unique audience groups, requiring clear audience positioning during editing to provide accurate and targeted information services. Big data provides convenience for sci-tech journal editors to analyze audiences' cultural backgrounds, education levels, majors, and interests, understanding their inner needs to pursue better development. For digital development, sci-tech journals should establish scientific information management systems to provide guarantees for digital development. Journal content should demonstrate digital advantages by effectively utilizing functions such as classification, organization, and automatic retrieval. Relying on digital advantages, journals should enhance connections with mobile devices, leveraging the convenience of smart mobile devices to promote the integration of sci-tech journals with intelligent devices.

Conclusion

In summary, the new media era presents a trend of integrated development among multiple technologies, and the development forms of sci-tech journals become more diversified under this background. New media has changed the original state of sci-tech journals while also revolutionizing editors' cognitive scope. They must not only provide publication products but also deliver services, shifting from cultural product processing to meeting audience personalized needs. Leveraging new media advantages for information dissemination has gradually become the development trend of the publishing industry in the current stage. With increasingly fierce market competition, sci-tech journal editors must consistently adhere to people-centered work concepts, clearly recognize their positioning, establish brand concepts, remain true to their original

aspirations, and provide high-quality scientific and technological services for audiences. Simultaneously, sci-tech journals should conform to the trend of the times, grasp new media advantages, optimize distribution channels, enhance digital construction, strengthen editors' comprehensive capabilities, emphasize innovation in both content and form, demonstrate their reliability and credibility, continuously innovate and develop in the globalized and market-oriented publishing industry, and ensure the virtuous cycle of sci-tech journals.

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