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Upholding Fundamentals and Innovating: Scientific Journals Toward the 15th Five-Year Plan

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Abstract

2025 is the concluding year of the 14th Five-Year Plan and also the year for strategizing the 15th Five-Year Plan (2026-2030). The next five years will be a crucial period for the development of China's scientific journals. Scientific journals must not only respond to national and societal expectations for building first-class journals, but also confront the significant impacts brought by information technologies represented by artificial intelligence (ArtificialIntelligence). The tremendous changes in the information environment require scientific journals to adapt accordingly, resonate in sync, balance tradition and innovation, seek development opportunities and paths amidst the “unchanged” and “changing”, and demonstrate their due responsibility and mission in supporting the national strategy of becoming a science and technology powerhouse.

Full Text

Scientific Journals in the “Fifteenth Five-Year Plan” Era: Upholding Fundamentals and Embracing Innovation

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The year 2025 marks the conclusion of the 14th Five-Year Plan and the strategic planning phase for the 15th Five-Year Plan (2026-2030). The next five years will be a critical period for the development of China's scientific journals. Scientific journals must not only respond to national and societal expectations for building world-class publications but also confront the significant impact of information technologies represented by Artificial Intelligence (AI). The profound changes in the information environment require journals to adapt accordingly, resonate with the times, and strike a balance between upholding fundamentals

and embracing innovation—seeking development opportunities and pathways amidst continuity and change, while demonstrating their due responsibility and role in supporting the national strategy of building China into a scientific and technological powerhouse.

In recent years, the state has accorded unprecedented attention to scientific journals. On November 14, 2018, the Fifth Meeting of the Central Committee for Comprehensively Deepening Reform reviewed and adopted the *Opinions on Deepening the Cultivation of World-Class Scientific Journals*, emphasizing that scientific journals inherit human civilization, assemble scientific discoveries, and lead scientific development, thereby directly reflecting national scientific competitiveness and cultural soft power. This document outlined strategic arrangements for cultivating world-class scientific journals.

Strategic Imperatives for the 15th Five-Year Plan Period

During the 15th Five-Year Plan period, China's scientific journals should continuously focus on major national scientific and technological strategic needs, align closely with the overall deployment of seizing strategic high ground in science and technology, and publish original, innovative, and cutting-edge research findings. They must effectively fulfill their supporting role in scientific and technological innovation and propel China's transformation from a major scientific nation to a scientific powerhouse. In this process, scientific journals should prioritize high-quality development as their core orientation and leverage AI technology application as an innovation driver, actively advancing innovations in journal operation models, optimizing operational mechanisms, improving institutional frameworks, and enhancing operational capabilities. With the strategic goal of building world-class journals, they should establish intensive, clustered, and group-based publishing and operation systems, strengthen the application of new technologies and methods, construct a comprehensive academic integrity governance system, and resolutely prevent and punish all forms of academic misconduct.

Core Requirements for Journal Excellence

Running a successful journal requires multi-dimensional support, including: establishing a clear positioning and distinctive character; ensuring adequate investment of human, material, and financial resources; assembling a strong editorial leadership team; strengthening guidance and supervision from regulatory authorities; securing support from sponsoring institutions; building a professional editorial office team; leveraging the academic leadership role of editorial boards; optimizing publishing models; reinforcing academic norm construction; cultivating high-caliber author pools; and establishing scientific and rational evaluation mechanisms. Central to all these efforts are the dual imperatives of quality building and influence building—two concepts that are neither equivalent nor interchangeable. High-quality journals and excellent papers only develop profound academic influence through extensive, rapid, precise, and effective dissem-

ination. Improving journal quality merely completes the foundational aspect of the journal's mission; only by emphasizing dissemination can a journal generate good and lasting influence.

Key Challenges Ahead

As China enters the new development stage of the 15th Five-Year Plan, its scientific journals must address the following key issues: evaluation criteria and construction pathways for world-class scientific journals; the role and influence of Chinese and Chinese-language scientific journals in the international academic system; the construction of open access publishing and policy frameworks under the open science paradigm; the impact of emerging technologies represented by AI on journal publishing models; the collaborative development of preprint platforms and traditional journal publishing; the think tank function of scientific journals and its implementation mechanisms; publishing models for data papers and data journals; semantic publishing and knowledge services in journal publishing based on data intelligence; publishing ethics centered on responsible research; and reforms to academic evaluation and scientific journal evaluation systems, among others.

The Dialectic of Technique and Principle

The key to running a successful scientific journal lies in properly managing the dialectical relationship between “technique” (术) and “principle” (道). “Technique” refers to the technical means used to alter a journal's external state, primarily manifested in quantifiable evaluation metrics: journal impact factor, literature standardization norms, writing expression standards, indexing in retrieval systems, various award rankings, economic benefit indicators, and inclusion in evaluation systems such as core journals, SCI, and Q1 categories. While these explicit indicators are important, excessive pursuit of them can easily trap journal development in a utilitarian quagmire.

“Principle,” by contrast, constitutes the soul of a journal. It embodies the journal's spiritual core, cultural taste, and value pursuits—the intrinsic laws that transcend quantitative metrics. Specifically, this includes supporting disciplinary construction, guiding academic directions, promoting innovative research, and fostering talent development. These dimensions of “principle” may be difficult to quantify, yet they represent the very foundation and soul of academic journals. The journey from “technique” to “principle” is a transformative process akin to a caterpillar's metamorphosis into a butterfly. The ideal state of journal operation should achieve an organic unity between external technical indicators and internal academic quality—a high degree of integration between “technique” and “principle.” Academic journals should take “advancing the fundamental principle” as their core purpose, seeking, comprehending, and attaining “principle” in editorial practice. They must maintain “principle” in mind while wielding “technique” in hand, using “principle” to guide “technique” and “technique” to carry “principle.” Only through the fusion of “technique” and “principle” can

scientific journals realize their true value and play their proper role in promoting academic innovation and disciplinary development.

Conclusion

As we face the 15th Five-Year Plan, are China' s scientific journals ready?

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