Examining Post-Print in Chinese Scientific Journal Cluster Construction Through Projects Selected for the China Science and Technology Journal Excellence Action Plan

Authors: Li Na, Wu Nada

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Abstract

Through analysis of the data and characteristics of selected projects under the "Excellence Action Plan for Chinese Science and Technology Journals,"this study summarizes the development priorities, models, and experiences that can serve as references for the construction and clustering development of Chinese science and technology journals. Journal construction and clustering development are mutually reinforcing, with the trend toward clustering being unstoppable. Based on the specific professional status quo and resource conditions, we should draw lessons from three types of development models—large-scale comprehensive publishing, brand publishing with distinctive professional characteristics, and society publishing—and explore the mutual integration of different models.

Full Text

A Perspective on the Clustering Construction of Chinese Scientific Journals from the Selected Projects of the "China Science and Technology Journal Excellence Action Plan"

Li Na, Wu Nada
(Academic Publishing Center, Beijing Information and Communication Media Co., Ltd., Beijing 100078)

Abstract: By analyzing the data and characteristics of selected projects under the "China Science and Technology Journal Excellence Action Plan," this study summarizes key development priorities, models, and experiences that can inform the construction and clustering development of Chinese scientific journals. Journal construction and clustering development are mutually reinforcing, and the

trend toward clustering is unstoppable. Drawing upon three distinct development models—large-scale comprehensive publishing, brand publishing with clear professional characteristics, and society publishing—journal operators should explore integrated approaches tailored to their specific disciplinary contexts and resource conditions.

Keywords: Excellence Action Plan; journal construction; clustering construction; brand publishing; society publishing

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To conscientiously implement the *Opinions on Deepening Reform to Cultivate World-Class Scientific Journals* [**?**] and promote the high-quality development of China' s scientific journals, the China Association for Science and Technology (CAST), jointly with the Ministry of Finance, Ministry of Education, Ministry of Science and Technology, and the National Press and Publication Administration, launched the "China Science and Technology Journal Excellence Action Plan" in 2019. The plan comprises seven sub-programs: leading journals, key journals, echelon journals, new high-start journals, clustering pilots, international digital publishing service platforms, and cultivation of high-level publishing talent. In 2019, applications were accepted for five sub-programs: leading journals, key journals, echelon journals, new high-start journals, and clustering pilots.

Following project submission, qualification review, presentation evaluation, and final review by the Expert Committee for World-Class Scientific Journal Construction, the Excellence Action Plan selected 285 projects, including 280 journal projects and 5 clustering pilot projects [**?**].

1.1 Language Distribution of Journal Projects

In the leading and key journal categories, English-language journals accounted for 100% of selections. In the echelon journal category, English journals represented nearly 50%. These English journals include both former Chinese journals that transitioned to English publication and newly launched English versions coexisting with their Chinese counterparts, yielding valuable experience in English-language publishing for Chinese scientific journals.

1.2 Hosting and Supervising Unit Distribution

The 280 selected journals involved 164 hosting organizations. Among these, 107 organizations hosted only one selected journal, while six organizations hosted five or more journals: the Chinese Medical Association (19 journals), Chinese Academy of Sciences (11 journals), Tsinghua University (8 journals), Higher Education Press Ltd. (7 journals), China Science Publishing & Media Ltd. (5 journals), and Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences (5 journals). These leading hosting organizations demonstrated clear advantages in the clustering pilot selection.

The selected journals fell under the supervision of 36 administrative authorities. Twenty-three authorities supervised only one selected journal each, while five authorities supervised five or more journals: China Association for Science and Technology (92 journals), Chinese Academy of Sciences (74 journals), Ministry of Education (60 journals), Ministry of Industry and Information Technology (5 journals), and Ministry of Agriculture and Rural Affairs (5 journals).

2. Clustering Pilot Projects

Although only five units were selected as clustering pilots, their publishing landscapes exhibit distinctive characteristics. The primary development models for these clustering pilots fall into three categories: large-scale comprehensive publishing, brand publishing with distinctive professional features, and society publishing.

2.1 Large-Scale Comprehensive Publishing

The clustering pilots representing large-scale comprehensive publishing institutions are China Science Publishing & Media Ltd. and Higher Education Press Ltd. China Science Publishing & Media Ltd., China' s largest comprehensive science and technology publisher and an affiliate of the Chinese Academy of Sciences, maintains a high-level, high-quality, multidisciplinary journal portfolio. In 2019, the company published over 300 journals annually, with approximately 50 journals indexed in SCI and EI respectively. *Science China* and *Chinese Science Bulletin* are prestigious academic journals operating on the Chinese Academy of Sciences academic division platform and represent well-known brands among China' s natural science journals. Notably, the English and Chinese versions of *Chinese Science Bulletin* were selected as leading and echelon journal projects, respectively.

Higher Education Press Ltd. aligns its publication development with national scientific research and publishing initiatives, forming a portfolio of premium product lines. Its journal scale and influence rank among the top in China. The press hosts and co-hosts various journals including *Journal of Ideological and Theoretical Education*, *China University Teaching*, *Foreign Languages in China*, *Chinese Editors Journal*, *Studies on Marxist Theory*, and the "Frontiers"series of English academic journals, constituting a substantial academic journal cluster.

2.2 Brand Publishing with Distinctive Professional Characteristics

Clustering pilots in this category include China Laser Press and Yousebo Han (Beijing) Publishing Ltd. China Laser Press, affiliated with the Shanghai Institute of Optics and Fine Mechanics (Chinese Academy of Sciences) and the Chinese Optical Society, is a specialized publisher featuring seven journals and two websites. Focusing on optoelectronics academic and professional journals, it pursues internationalization, digitalization, clustering, and diversified media products as its development direction. With only seven published journals, five

were selected for key (2) and echelon (3) journal projects, demonstrating its specialized and refined characteristics.

Yousebo Han (Beijing) Publishing Ltd. represents the sole legally incorporated journal cluster in the non-ferrous metals field and serves as a model achieving both notable social and economic benefits. Currently, the company oversees seven journals, including two indexed in SCI, one in ESCI, and three in EI, with two selected as echelon journal projects.

2.3 Society Publishing

The Chinese Medical Association exemplifies the society publishing model. The association publishes and distributes 183 print and electronic medical journals, with one selected as a leading journal project and 15 as echelon journal projects.

3. Analysis and Reflections

3.1 Trends in Clustering Publishing

Journal construction and clustering development are complementary processes. Among the hosting organizations with five or more selected journals, three—the Chinese Medical Association, Higher Education Press Ltd., and China Science Publishing & Media Ltd.—were directly selected as clustering pilots. The Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, which hosted five selected journals, saw its publishing arm—China Laser Press—also selected as a clustering pilot. Among the 11 journals hosted by the Chinese Academy of Sciences, ten belong to China Science Publishing & Media Ltd.

3.2 Exploring Clustering Publishing Models

The trend toward clustering development is unstoppable [**?**]. Drawing upon the three models—large-scale comprehensive publishing, brand publishing with distinctive professional characteristics, and society publishing—journal operators can identify suitable development directions and consider integrating different models based on their specific disciplinary contexts and resource conditions.

A collaborative model between professional societies and non-comprehensive publishers represents a viable clustering approach worth exploring, given China' s current scientific journal publishing landscape. Most societies lack professional, large-scale experience in scientific journal publishing, while specialized publishing units often have insufficient academic resources. Some societies sponsor or guide different scientific journals through various publishing units, dispersing publishing strength and hindering unified management. Meanwhile, most publishing units lack adequate academic support.

The five clustering pilots are all backed by robust professional academic strength. The Chinese Academy of Sciences and national scientific research teams provide indispensable support for large-scale comprehensive publishers through their

broad disciplinary coverage. The Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, the Chinese Optical Society, the General Research Institute for Nonferrous Metals, and the Chinese Medical Association are all professional leaders in their respective fields that have consciously pursued clustering publishing with notable success. Therefore, integrating resources through society platforms and relying on specialized publishers with certain scale to develop journal clusters can concentrate efforts on building world-class scientific journals in respective fields.

3.3.1 Bilingual Publishing for Advantageous Journals

In journal construction, it is essential to select well-established scientific journals for intensified development and brand cultivation. To expand influence in the international scientific community, Chinese scientific journals must accelerate English publishing, particularly those already influential in domestic professional fields that urgently need to prioritize English publication [**?**].

3.3.2 Filling Gaps in Key Fields

During clustering development, it is necessary to focus on key areas of national innovation development and serve national strategic needs by truly addressing weaknesses and filling gaps. Based on the priority construction fields for new high-start journals outlined in the Excellence Action Plan guidelines, scientific journal practitioners should pay close attention to scientific and technological fields related to their work scope.

3.3.3 Innovating Knowledge Service Approaches

In the current publishing environment, it is necessary not only to strengthen content construction but also to innovate operational models, improve dissemination chains, and enhance digital survival and service capabilities [**?**]. By optimizing pre- and post-publication processes, innovating knowledge service methods, increasing knowledge service value, and comprehensively serving reader and author communities, scientific journals can achieve industry-academia integration and upgrade their industrial chains.

Through analysis of the Excellence Action Plan selected projects, these reflections on journal clustering construction emerge. Building upon strengthened journal construction, it is necessary to explore the integration of different clustering development models according to specific disciplinary contexts and resource conditions, achieving full integration of strong academic and professional publishing capabilities to continuously enhance the influence and discourse power of Chinese scientific journals in the global academic community.

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Author Biographies:
Li Na (1992-), female, from Hubei, Editor. Research interests: scientific journal development and library intelligence.
Wu Nada (1980-), female, from Guizhou, Associate Editor. Research interests: scientific journal development, library intelligence, and academic services.

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